



# MONTANA SHEEP & LAMB LOSSES--1989



Released: APRIL 1990

Montana sheepmen lost 141,000 sheep and lambs to weather, predators, disease and other causes in 1989, according to a survey conducted by the Montana Agricultural Statistics Service. Total loss was 6 percent lower than 1988 and represented a value of \$7.6 million. The 1989 dollar loss was 15 percent less than the previous year.

Predators caused a \$2.0 million loss, non-predator factors caused \$4.3 million and unknown causes claimed \$1.4 million.

Coyote predation remained the single largest cause of death with a \$1.5 million loss. This is 20 percent of total value of death losses.

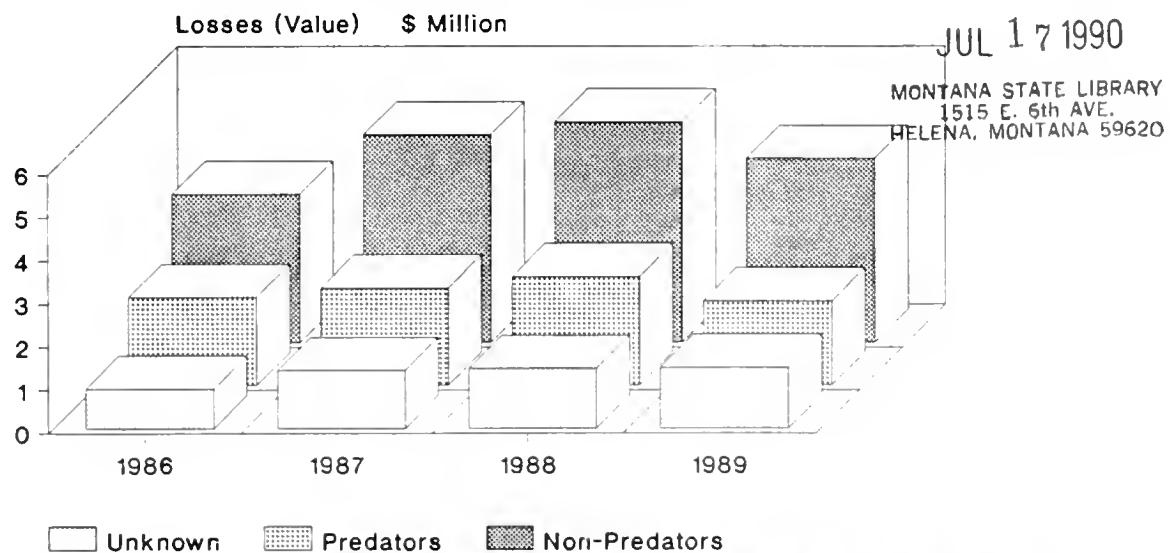
Lambs killed by all predators amounted to 28,200, down 16 percent from last year. Sheep killed by predators totaled 7,700, down 19 percent.

Lambs lost to weather, disease, and other non-predator causes totaled 52,500, up 3 percent from 1988. Sheep losses to non-predator factors totaled 28,300, 17 percent less than last year.

Lambs lost to unknown causes were 17,300, up 11 percent, and sheep were 7,000, up 6 percent from last year.

## Sheep & Lamb Losses-1989 Causes of Death

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## METHODOLOGY and DEFINITIONS

The sheep and lamb survey utilized multi-frame sampling procedures. This involved drawing a random sample from a list of livestock producers maintained by the Montana Agricultural Statistics Service. In addition, sheep producers living in a selected sample of area segments were interviewed. This procedure assures more complete coverage by accounting for and representing those who may not be on the list of producers.

Sheep and lamb loss estimates published by the USDA include sheep losses for the entire year, but include only those lamb losses that occur after docking. This special report includes an estimate of lambs lost before docking as well.

## COOPERATION

This study was undertaken at the request of the **Montana Wool Growers Association** who also provide funding. The Montana Agricultural Statistics Service conducted the survey and expresses appreciation to all cooperating sheep producers.

## MONTANA HISTORIC SHEEP and LAMB LOSS

		1983	1984	1985	1986	1987	1988	1989
Sheep & Lambs 1/	000 Hd.	600	604	615	523	563	597	600
Pred. Death Loss	000 Hd.	34.4	51.7	51.7	42.1	36.7	43.1	35.9
Value Pred. Loss	000 Dol.	1,267.4	2,275.4	2,469.5	2,051.1	2,260.5	2,519.7	1,956.4
Non-Pred. Death Loss	000 Hd.	73.0	111.7	59.8	72.1	79.8	84.7	80.8
Value Non-Pred. Loss	000 Dol.	2,804.2	4,847.6	2,704.6	3,437.9	4,825.4	5,115.3	4,264.8
Unknown Death Loss	000 Hd.	12.6	16.6	15.5	17.8	20.3	22.2	24.3
Value Unknown Loss	000 Dol.	510.7	743.0	776.1	920.0	1,343.0	1,386.6	1,405.0
Total Death Loss 2/	000 Hd.	120.0	180.0	127.0	132.0	137.0	150.0	141.0
Value Death Loss 3/	000 Dol.	4,582.3	7,866.0	5,950.2	6,409.1	8,428.9	9,021.6	7,626.2

1/ On farms and ranches January 1. 2/ For entire year. 3/ Value lambs equal to September, October, November average price received converted to 70 lb. lamb. Value sheep equal to January inventory value Ewes 1+.

## MONTANA SHEEP AND LAMB LOSSES BY CAUSE - 1989

Cause of Loss	Sheep Loss		Lamb Loss		Total Loss	
	Number of Head	Value in Dollars 1/	Number of Head	Value in Dollars 2/	Number of Head	Value in Dollars
<b>PREDATORS</b>						
Fox	100	9,000	3,400	152,320	3,500	161,320
Dog	900	81,000	600	26,880	1,500	107,880
Coyote	6,100	549,000	22,100	990,080	28,200	1,539,080
Eagle	100	9,000	700	31,360	800	40,360
Bobcat	3/	--	400	17,920	400	17,920
Bear	500	45,000	500	22,400	1,000	67,400
Mountain Lion	3/	--	500	22,400	500	22,400
Other Animals	3/	--	3/	--	3/	--
<b>TOTAL PREDATORS</b>	<b>7,700</b>	<b>693,000</b>	<b>28,200</b>	<b>1,263,360</b>	<b>35,900</b>	<b>1,956,360</b>
<b>NON-PREDATORS</b>						
Weather Conditions	2,500	225,000	20,900	936,320	23,400	1,161,320
Disease	3,300	297,000	9,600	430,080	12,900	727,080
Poison	1,400	126,000	1,100	49,280	2,500	175,280
Lambing Complications	3,300	297,000	14,100	631,680	17,400	928,680
On Back	2,400	216,000	200	8,960	2,600	224,960
Old Age*	10,900	346,838	0	--	10,900	346,838
Theft	1,500	135,000	1,900	85,120	3,400	220,120
Other	3,000	270,000	4,700	210,560	7,700	480,560
<b>TOTAL NON-PREDATORS</b>	<b>28,300</b>	<b>1,912,838</b>	<b>52,500</b>	<b>2,352,000</b>	<b>80,800</b>	<b>4,264,838</b>
<b>UNKNOWN CAUSES</b>	<b>7,000</b>	<b>630,000</b>	<b>17,300</b>	<b>775,040</b>	<b>24,300</b>	<b>1,405,040</b>
<b>TOTAL LOSS</b>	<b>43,000</b>	<b>3,235,838</b>	<b>98,000</b>	<b>4,390,400</b>	<b>141,000</b>	<b>7,626,238</b>

1/ Average reported value January 1, 1989 for Ewes 1+ = 90.00/hd. 2/ Lamb value based on average monthly prices received by farmers for all lambs marketed during Sept., Oct., Nov., 1989, converted to an average value per head of \$44.80, based on 70 pounds liveweight (avg). 3/ Less than 100

\* Average value for this category calculated basis of slaughter prices October-December 1989 @ \$23.57/cwt x 135# = \$31.82/hd.

**PERCENT OF TOTAL SHEEP AND LAMB LOSSES BY CAUSE AND SIZE OF FLOCK, MONTANA--1989**

CAUSE OF LOSS	SIZE OF FLOCK					All Size
	1-49	50-299	300-999	1000-2499	2500+	
	Percent					
<b>PREDATORS</b>						
Fox	0	2	4	6	4	3
Dog	6	3	1	0	0	2
Coyote	11	22	29	22	28	23
Eagle	0	1	4	2	5	2
Bobcat	0	0	0	0	2	1/
Bear	0	0	1	2	2	1
Mountain Lion	0	0	0	2	0	1/
Other Animals	0	0	0	0	0	0
<b>TOTAL PREDATORS</b>	<b>18</b>	<b>28</b>	<b>38</b>	<b>34</b>	<b>41</b>	<b>32</b>
<b>NON-PREDATORS</b>						
Weather Conditions	20	7	11	10	13	11
Disease	12	11	11	9	6	10
Poison	0	11	1	2	6	4
Lambing Complications	21	11	8	7	8	10
On Back	1	1	1	2	2	2
Old Age	5	4	5	5	2	4
Theft	0	1	1	4	3	1/
Other	13	12	12	15	11	15
<b>TOTAL NON-PREDATORS</b>	<b>72</b>	<b>58</b>	<b>50</b>	<b>54</b>	<b>51</b>	<b>56</b>
<b>UNKNOWN CAUSES</b>	<b>11</b>	<b>14</b>	<b>12</b>	<b>12</b>	<b>7</b>	<b>12</b>
<b>TOTAL LOSS</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

1/ Less than 1 percent.

Lyle H. Pratt  
State Statistician

Sidney W. Lebahn  
Agricultural Statistician



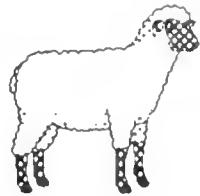
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# MONTANA SHEEP & LAMB LOSSES--1990



Released: APRIL 1991

Montana sheepmen lost 133,000 sheep and lambs to weather, predators, disease and other causes in 1990, according to a survey conducted by the Montana Agricultural Statistics Service. Total loss was 6 percent lower than 1989 and represented a value of \$5.7 million. The 1990 dollar loss was 25 percent less than the previous year.

Predators caused a \$1.5 million loss, non-predator factors caused \$3.6 million and unknown causes claimed \$0.7 million

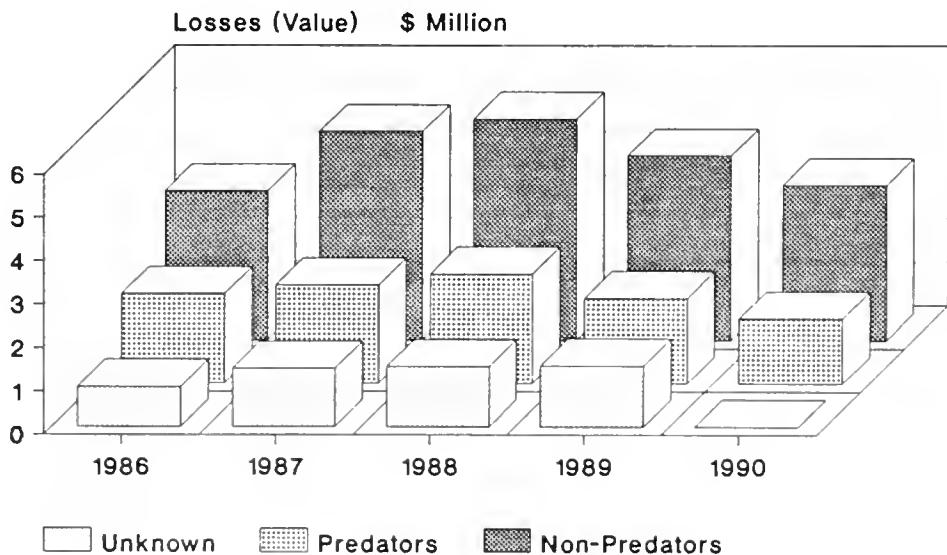
Coyote predation remained the single largest cause of death with a \$1.1 million loss. This is 20 percent of total value of death losses.

Lambs killed by all predators amounted to 31,500, up 12 percent from last year. Sheep killed by predators totaled 7,600, down 1 percent.

Lambs lost to weather, disease, and other non-predator causes totaled 52,900, up 1 percent from 1989. Sheep losses to non-predator factors totaled 27,000, 5 percent less than last year.

Lambs lost to unknown causes were 8,600, down 50 percent, and sheep were 5,400, down 23 percent from last year.

## Sheep & Lamb Losses-1990 Causes of Death



## METHODOLOGY and DEFINITIONS

The sheep and lamb survey utilized multi-frame sampling procedures. This involved drawing a random sample from a list of livestock producers maintained by the Montana Agricultural Statistics Service. In addition, sheep producers living in a selected sample of area segments were interviewed. This procedure assures more complete coverage by accounting for and representing those who may not be on the list of producers.

Sheep and lamb loss estimates published by the USDA include sheep losses for the entire year, but include only those lamb losses that occur after docking. This special report includes an estimate of lambs lost before docking as well.

## COOPERATION

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## MONTANA HISTORIC SHEEP and LAMB LOSS

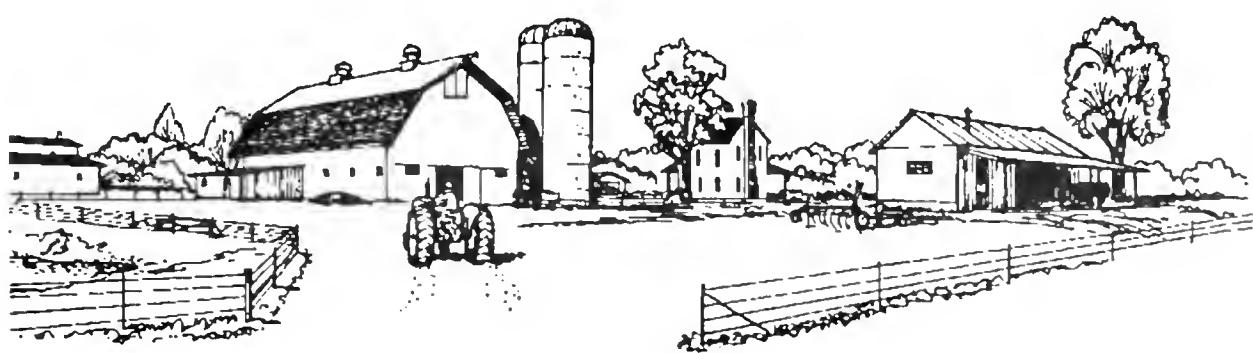
Sheep & Lambs 1/ 000 Hd.		1984	1985	1986	1987	1988	1989	1990
		604	615	523	563	597	600	663
Pred. Death Loss	000 Hd.	51.7	51.7	42.1	36.7	43.1	35.9	39.1
Value Pred. Loss	000 Dol.	2,275.4	2,469.5	2,051.1	2,260.5	2,519.7	1,956.4	1,491.1
Non-Pred. Death Loss	000 Hd.	111.7	59.8	72.1	79.8	84.7	80.8	79.9
Value Non-Pred. Loss	000 Dol.	4,847.6	2,704.6	3,437.9	4,825.4	5,115.3	4,264.8	3,586.1
Unknown Death Loss	000 Hd.	16.6	15.5	17.8	20.3	22.2	24.3	14.0
Value Un- known Loss	000 Dol.	743.0	776.1	920.0	1,343.0	1,386.6	1,405.0	659.8
Total Death Loss 2/	000 Hd.	180.0	127.0	132.0	137.0	150.0	141.0	133.0
Value Death Loss 3/	000 Dol.	7,866.0	5,950.2	6,409.1	8,428.9	9,021.6	7,626.2	5,737.0

1/ On farms and ranches January 1. 2/ For entire year. 3/ Lamb values equal to market year average price received for lambs applied to an average weight of 60 pounds per lamb. Sheep value equal to January inventory value Ewes 1+, straight average 1990 and 1991.

## MONTANA SHEEP AND LAMB LOSSES BY CAUSE - 1990

Cause of Loss	Sheep Loss		Lamb Loss		Total Loss	
	Number of Head	Value in Dollars 1/	Number of Head	Value in Dollars 2/	Number of Head	Value in Dollars
<b>PREDATORS</b>						
Fox	100	7,600	3,900	113,100	4,000	120,700
Dog	600	45,600	1,000	29,000	1,600	74,600
Coyote	6,100	463,600	23,600	684,400	29,700	1,148,000
Eagle	100	7,600	2,100	60,900	2,200	68,500
Bobcat	3/	--	3/	--	3/	--
Bear	400	30,400	300	8,700	700	39,100
Mountain Lion	100	7,600	500	14,500	600	22,100
Other Animals	200	15,200	100	2,900	300	18,100
<b>TOTAL PREDATORS</b>	<b>7,600</b>	<b>577,600</b>	<b>31,500</b>	<b>913,500</b>	<b>39,100</b>	<b>1,491,100</b>
<b>NON-PREDATORS</b>						
Weather Conditions	2,700	205,200	16,400	475,600	19,100	680,800
Disease	4,000	304,000	10,500	304,500	14,500	608,500
Poison	1,500	114,000	1,400	40,600	2,900	154,600
Lambing Complications	3,400	258,400	18,300	530,700	21,700	789,100
On Back	2,400	182,400	100	2,900	2,500	185,300
Old Age	9,200	699,200	0	--	9,200	699,200
Theft	800	60,800	1,700	49,300	2,500	110,100
Other	3,000	228,000	4,500	130,500	7,500	358,500
<b>TOTAL NON-PREDATORS</b>	<b>27,000</b>	<b>2,052,000</b>	<b>52,900</b>	<b>1,534,100</b>	<b>79,900</b>	<b>3,586,100</b>
<b>UNKNOWN CAUSES</b>	<b>5,400</b>	<b>410,400</b>	<b>8,600</b>	<b>249,400</b>	<b>14,000</b>	<b>659,800</b>
<b>TOTAL LOSS</b>	<b>40,000</b>	<b>3,040,000</b>	<b>93,000</b>	<b>2,697,000</b>	<b>133,000</b>	<b>5,737,000</b>

1/ Average reported value January 1, 1990 and January 1, 1991 for Ewes 1+. 2/ Lamb value based on average monthly prices received by farmers for all lambs marketed 1990, applied to an average weight of 60 pounds liveweight per lamb. 3/ Less than 100.



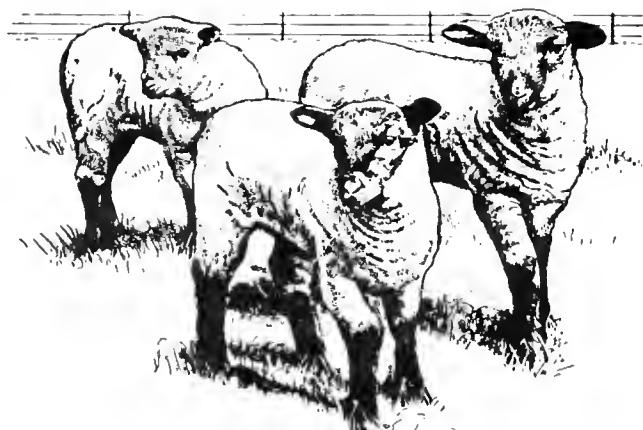
**PERCENT OF TOTAL SHEEP AND LAMB LOSSES BY CAUSE AND SIZE OF FLOCK, MONTANA--1990**

CAUSE OF LOSS	SIZE OF FLOCK					All Sizes
	1-49	50-299	300-999	1000-2499	2500+	
-----Percent-----						
<b>PREDATORS</b>						
Fox	2	1	4	7	3	4
Dog	3	1/	2	1/	1/	1
Coyote	10	25	33	22	33	25
Eagle	3	1/	2	2	1	2
Bobcat	0	0	0	0	1/	1/
Bear	0	1	0	1	2	1/
Mountain Lion	1/	1/	0	1	2	1
Other Animals	1/	1/	1/	1/	1/	1/
<b>TOTAL PREDATORS</b>	<b>18</b>	<b>27</b>	<b>41</b>	<b>33</b>	<b>41</b>	<b>33</b>
<b>NON-PREDATORS</b>						
Weather Conditions	12	9	10	9	10	10
Disease	14	19	9	12	10	13
Poison	1	1	2	3	4	2
Lambing Complications	23	14	16	12	11	16
On Back	1	1	1	2	2	1
Old Age	10	8	3	6	4	6
Theft	7	0	2	2	0	2
Other	5	8	3	9	5	5
<b>TOTAL NON-PREDATORS</b>	<b>73</b>	<b>60</b>	<b>46</b>	<b>55</b>	<b>47</b>	<b>55</b>
<b>UNKNOWN CAUSES</b>	<b>9</b>	<b>13</b>	<b>13</b>	<b>12</b>	<b>12</b>	<b>12</b>
<b>TOTAL LOSS</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

1/ Less than 1 percent.

James K. Sands  
State Statistician

Sidney W. Lebahm  
Agricultural Statistician



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# MONTANA SHEEP & LAMB LOSSES--1991



Released: APRIL 1992

Montana sheep producers lost 142,000 sheep and lambs to weather, predators, disease and other causes during 1991, representing a total value of \$5.3 million, according to a survey conducted by the Montana Agricultural Statistics Service. Despite an increase of 7 percent in total head lost from 1990, the total value of inventory lost in 1991 decreased \$417,000 from the previous year, largely due to a decrease in sheep and lamb prices.

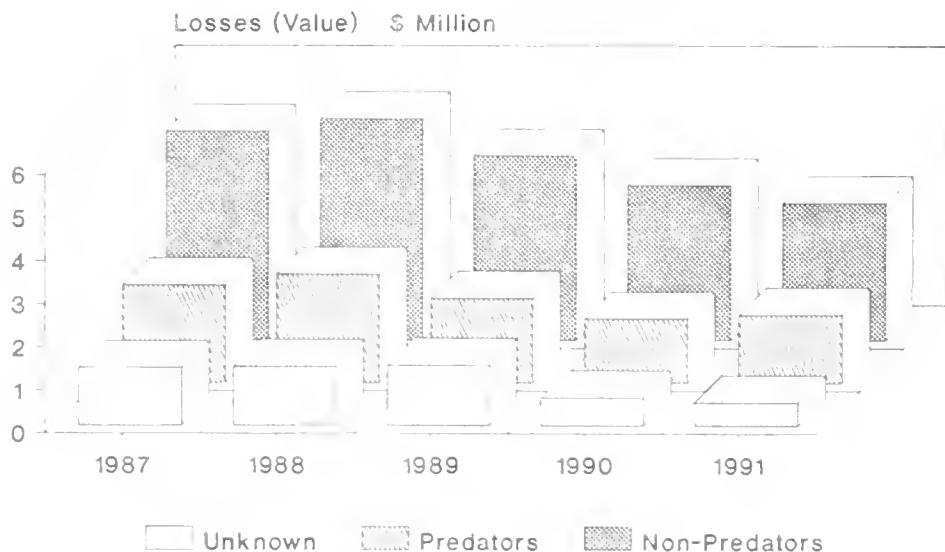
Predators caused a \$1.6 million loss, while non-predator factors caused \$3.2 million and unknown causes claimed \$550,400. Coyote predation remained the single largest cause of death with a \$1.2 million loss. This accounts for 22 percent of the total value of death losses in the state.

Lambs killed by all predators amounted to 34,500, up 10 percent from last year. Sheep killed by predators totaled 10,400 up 37 percent.

Lambs lost to weather, disease and other non-predator causes totaled 57,200, up 8 percent from 1990. Sheep losses to non-predator factors totaled 26,300, 3 percent less than last year.

Lambs lost to unknown causes were 8,300 down 3 percent, and sheep were 5,300 down 2 percent from last year.

## Sheep & Lamb Losses - 1991 Causes of Death



## METHODOLOGY and DEFINITIONS

The sheep and lamb survey utilized multi-frame sampling procedures. This involved drawing a random sample from a list of livestock producers maintained by the Montana Agricultural Statistics Service. In addition, sheep producers living in a selected sample of area segments were interviewed. This procedure assures more complete coverage by accounting for and representing those who may not be on the list of producers.

Sheep and lamb loss estimates published by the USDA include sheep losses for the entire year, but include only those lamb losses that occur after docking. This special report includes an estimate of lambs lost before docking as well.

## COOPERATION

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## MONTANA HISTORIC SHEEP and LAMB LOSS

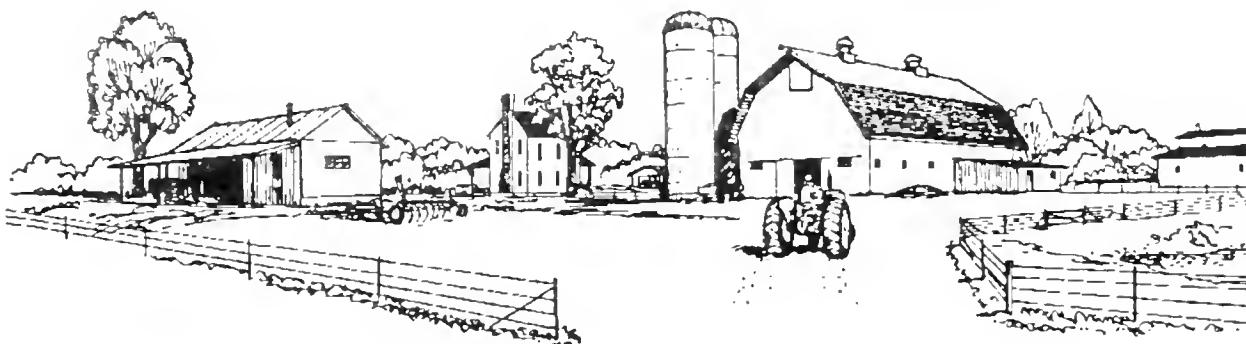
		1985	1986	1987	1988	1989	1990	1991
Sheep & Lambs 1/	000 Hd.	615	523	563	597	600	663	683
Pred. Death Loss	000 Hd.	51.7	42.1	36.7	43.1	35.9	39.1	44.9
Value Pred. Loss	000 Dol.	2,469.5	2,051.1	2,260.5	2,519.7	1,956.4	1,491.1	1,590.0
Non-Pred. Death Loss	000 Hd.	59.8	72.1	79.8	84.7	80.8	79.9	83.5
Value Non-Pred. Loss	000 Dol.	2,704.6	3,437.9	4,825.4	5,115.3	4,264.8	3,586.1	3,179.6
Unknown Death Loss	000 Hd.	15.5	17.8	20.3	22.2	24.3	14.0	13.6
Value Unknown Loss	000 Dol.	776.1	920.0	1,343.0	1,386.6	1,405.0	659.8	550.4
Total Death Loss 2/	000 Hd.	127.0	132.0	137.0	150.0	141.0	133.0	142.0
Value Death Loss 3/	000 Dol.	5,950.2	6,409.1	8,428.9	9,021.6	7,626.2	5,737.0	5,320.0

1/ On farms and ranches January 1. 2/ For entire year. 3/ Lamb values equal to market year average price received for lambs applied to an average weight of 60 pounds per lamb. Sheep value equal to January inventory value Ewes 1+, straight average 1991 and 1992.

## MONTANA SHEEP AND LAMB LOSSES BY CAUSE - 1991

Cause of Loss	Sheep Loss		Lamb Loss		Total Loss	
	Number of Head	Value in Dollars 1/	Number of Head	Value in Dollars 2/	Number of Head	Value in Dollars
<b>PREDATORS</b>						
Fox	100	6,000	4,800	134,400	4,900	140,400
Dog	2,000	120,000	1,500	42,000	3,500	162,000
Coyote	7,600	456,000	26,100	730,800	33,700	1,186,800
Eagle	100	6,000	1,200	33,600	1,300	39,600
Bobcat	--	--	100	2,800	100	2,800
Bear	300	18,000	300	8,400	600	26,400
Mountain Lion	100	6,000	500	14,000	600	20,000
Other Animals	200	12,000	--	--	200	12,000
<b>TOTAL PREDATORS</b>	<b>10,400</b>	<b>624,000</b>	<b>34,500</b>	<b>966,000</b>	<b>44,900</b>	<b>1,590,000</b>
<b>NON-PREDATORS</b>						
Weather Conditions	4,400	264,000	17,100	478,800	21,500	742,800
Disease	3,900	234,000	10,600	296,800	14,500	530,800
Poison	1,700	102,000	900	25,200	2,600	127,200
Lambing Complications	3,700	222,000	21,300	596,400	25,000	818,400
On Back	2,300	138,000	300	8,400	2,600	146,400
Old Age	7,300	438,000	--	--	7,300	438,000
Theft	1,400	84,000	2,700	75,600	4,100	159,600
Other	1,600	96,000	4,300	120,400	5,900	216,400
<b>TOTAL NON-PREDATORS</b>	<b>26,300</b>	<b>1,578,000</b>	<b>57,200</b>	<b>1,601,600</b>	<b>83,500</b>	<b>3,179,600</b>
<b>UNKNOWN CAUSES</b>	<b>5,300</b>	<b>318,000</b>	<b>8,300</b>	<b>232,400</b>	<b>13,600</b>	<b>550,400</b>
<b>TOTAL LOSS</b>	<b>42,000</b>	<b>2,520,000</b>	<b>100,000</b>	<b>2,800,000</b>	<b>142,000</b>	<b>5,320,000</b>

1/ Average reported value January 1, 1991 and January 1, 1992 for Ewes 1+. 2/ Lamb value based on average monthly prices received by farmers for all lambs marketed 1991, applied to an average weight of 60 pounds liveweight per lamb. -- Denotes less than 100.



**PERCENT OF TOTAL SHEEP AND LAMB LOSSES BY CAUSE AND SIZE OF FLOCK, MONTANA--1991**

CAUSE OF LOSS	SIZE OF FLOCK					All Sizes
	1-99	100-299	300-999	1000-2499	2500+	
-----Percent-----						
<b>PREDATORS</b>						
Fox	8	3	4	4	2	4
Dog	2	7	2	--	--	2
Coyote	21	19	25	28	32	25
Eagle	2	--	1	--	1	1
Bobcat	--	--	--	--	0	--
Bear	1	--	--	--	1	--
Mountain Lion	--	1	--	--	1	--
Other Animals	--	--	--	--	--	--
<b>TOTAL PREDATORS</b>	<b>35</b>	<b>31</b>	<b>32</b>	<b>33</b>	<b>36</b>	<b>33</b>
<b>NON-PREDATORS</b>						
Weather Conditions	18	7	19	19	13	16
Disease	10	11	8	12	10	11
Poison	--	2	2	2	3	2
Lambing Complications	15	19	15	14	14	15
On Back	1	1	2	2	1	2
Old Age	6	4	4	1	3	3
Theft	1	--	2	6	5	3
Other	3	5	5	3	7	4
<b>TOTAL NON-PREDATORS</b>	<b>54</b>	<b>54</b>	<b>59</b>	<b>59</b>	<b>55</b>	<b>57</b>
<b>UNKNOWN CAUSES</b>	<b>11</b>	<b>14</b>	<b>9</b>	<b>7</b>	<b>8</b>	<b>10</b>
<b>TOTAL LOSS</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

-- Denotes less than 1 percent.

James K. Sands  
State Statistician

Lisa Peterson  
Agricultural Statistician



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# MONTANA SHEEP & LAMB LOSSES--1992



Montana sheep producers lost 112,000 sheep and lambs to weather, predators, disease and other causes during 1992, representing a total value of \$4.7 million, according to a survey conducted by the Montana Agricultural Statistics Service. Total head lost was 21 percent lower than 1991. The total value of inventory lost in 1992 decreased \$655,900 from the previous year.

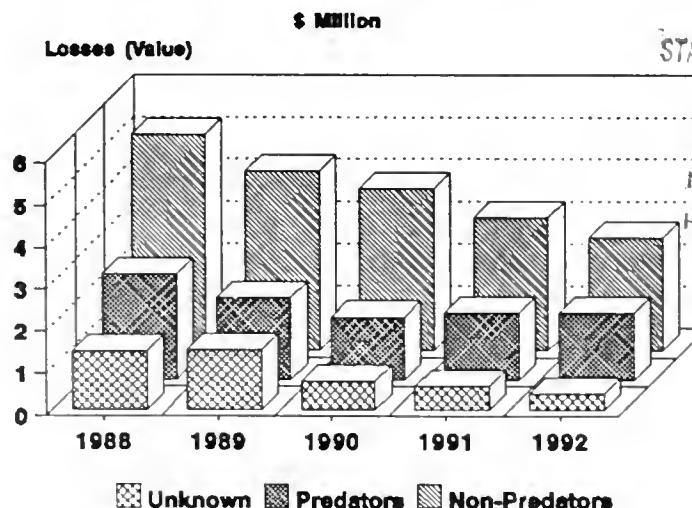
Predators caused \$1.6 million in losses, while non-predator factors accounted for \$2.7 million and unknown causes claimed \$.4 million. Coyotes remain the single largest cause of death resulting in a \$1.2 million loss. This accounts for 26 percent of the total value of death losses in the state.

Lambs killed by all predators amounted to 32,900 head, down 5 percent from last year. Sheep killed by predators totaled 8,300 down 20 percent.

Lambs lost to weather, disease and other non-predator causes totaled 40,600 head, down 29 percent from 1991. Sheep losses to non-predator factors totaled 22,400, marking a 15 percent decrease from last year.

Lambs lost to unknown causes were down 58 percent to 3,500 head. Unknown causes claimed 4,300 head of sheep, down 19 percent from last year.

## Sheep & Lamb Losses-1992 Causes of Death



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## METHODOLOGY and DEFINITIONS

The sheep and lamb survey utilized multi-frame sampling procedures. This involved drawing a random sample from a list of livestock producers maintained by the Montana Agricultural Statistics Service. In addition, sheep producers living in a selected sample of area segments were interviewed. This procedure assures complete coverage of sheep producers by accounting for ranchers/farmers who may not be on the list.

Sheep and lamb loss estimates published by the USDA include sheep losses for the entire year, but include only those lamb losses that occur after docking. This special report includes an estimate of lambs lost before docking as well.

## COOPERATION

This study was undertaken at the request of the Montana Wool Growers Association who also provided funding. The Montana Agricultural Statistics Service conducted the survey and expresses appreciation to all cooperating sheep producers.

## MONTANA HISTORIC SHEEP and LAMB LOSS

Year	1986	1987	1988	1989	1990	1991	1992	
January 1 Sheep & Lamb Inventory	000 Hd.	523	563	597	600	663	683	658
Pred. Death Loss	000 Hd.	42.1	36.7	43.1	35.9	39.1	44.9	41.2
Value Pred. Loss	000 Dol.	2,051.1	2,260.5	2,519.7	1,956.4	1,491.1	1,590.0	1,593.6
Non-Pred. Death Loss	000 Hd.	72.1	79.8	84.7	80.8	79.9	83.5	63.0
Value Non-Pred. Loss	000 Dol.	3,437.9	4,825.4	5,115.3	4,264.8	3,586.1	3,179.6	2,696.0
Unknown Death Loss	000 Hd.	17.8	20.3	22.2	24.3	14.0	13.6	7.8
Value Un- known Loss	000 Dol.	920.0	1,343.0	1,386.6	1,405.0	659.8	550.4	374.6
Annual Death Loss	000 Hd.	132.0	137.0	150.0	141.0	133.0	142.0	112.0
Value Death Loss 1/	000 Dol.	6,409.1	8,428.9	9,021.6	7,626.2	5,737.0	5,320.0	4,664.1

1/ Lamb values equal to market year average price received for lambs multiplied by an average weight of 60 pounds per lamb. Sheep value equals an average inventory value for Ewes 1+.

## MONTANA SHEEP AND LAMB LOSSES BY CAUSE - 1992

Cause of Loss	Sheep Loss		Lamb Loss		Total Loss	
	Number of Head	Value in Dollars 1/	Number of Head	Value in Dollars 2/	Number of Head	Value in Dollars
<b>PREDATORS</b>						
Fox	200	12,000	4,800	159,840	5,000	171,840
Dog	800	48,000	1,000	33,300	1,800	81,300
Coyote	6,600	396,000	24,500	815,850	31,100	1,211,850
Eagle	100	6,000	1,800	59,940	1,900	65,940
Bobcat	--		--		--	
Bear	300	18,000	500	16,650	800	34,650
Mountain Lion	300	18,000	300	9,990	600	27,990
Other Animals	--		--		--	
<b>TOTAL PREDATORS</b>	<b>8,300</b>	<b>498,000</b>	<b>32,900</b>	<b>1,095,570</b>	<b>41,200</b>	<b>1,593,570</b>
<b>NON-PREDATORS</b>						
Weather Conditions	1,700	102,000	10,200	339,660	11,900	441,660
Disease	3,600	216,000	8,700	289,710	12,300	505,710
Poison	1,200	72,000	800	26,640	2,000	98,640
Lambing Complications	3,500	210,000	13,100	436,230	16,600	646,230
On Back	2,100	126,000	200	6,660	2,300	132,660
Old Age	6,300	378,000			6,300	378,000
Theft	800	48,000	2,100	69,930	2,900	117,930
Other	3,200	192,000	5,500	183,150	8,700	375,150
<b>TOTAL NON-PREDATORS</b>	<b>22,400</b>	<b>1,344,000</b>	<b>40,600</b>	<b>1,351,980</b>	<b>63,000</b>	<b>2,695,980</b>
<b>UNKNOWN CAUSES</b>	<b>4,300</b>	<b>258,000</b>	<b>3,500</b>	<b>116,550</b>	<b>7,800</b>	<b>374,550</b>
<b>TOTAL LOSS</b>	<b>35,000</b>	<b>2,100,000</b>	<b>77,000</b>	<b>2,564,100</b>	<b>112,000</b>	<b>4,664,100</b>

1/ Average reported value January 1, 1992 and January 1, 1993 for Ewes 1+. 2/ Lamb values equal to market year average price received for lambs multiplied by an average weight of 60 pounds per lamb.

-- Denotes less than 100 head.



**PERCENT OF TOTAL SHEEP AND LAMB LOSSES BY CAUSE AND SIZE OF FLOCK, MONTANA--1992**

CAUSE OF LOSS	SIZE OF FLOCK					All Size
	1-99	100-299	300-999	1000-2499	2500+	
	Percent					
<b>PREDATORS</b>						
Fox	2	2	4	7	9	4
Dog	2	4	1	--	1	2
Coyote	34	27	31	26	30	28
Eagle	1	1	1	3	4	2
Bobcat	--	--	--	--	--	--
Bear	--	--	1	--	2	1
Mountain Lion	--	--	--	--	2	1
Other Animals	--	--	--	--	--	--
<b>TOTAL PREDATORS 1/</b>	<b>39</b>	<b>34</b>	<b>39</b>	<b>37</b>	<b>48</b>	<b>37</b>
<b>NON-PREDATORS</b>						
Weather Conditions	9	7	11	10	11	11
Disease	12	11	11	12	10	11
Poison	--	1	2	2	3	2
Lambing Complications	18	24	14	11	10	15
On Back	1	2	1	2	2	2
Old Age	5	5	5	3	3	6
Theft	--	1	2	6	3	5
Other	9	8	8	9	7	8
<b>TOTAL NON-PREDATORS 1/</b>	<b>53</b>	<b>59</b>	<b>54</b>	<b>55</b>	<b>47</b>	<b>56</b>
<b>UNKNOWN CAUSES</b>	<b>8</b>	<b>7</b>	<b>7</b>	<b>8</b>	<b>5</b>	<b>7</b>
<b>TOTAL LOSS</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

1/ Totals may not add due to rounding.

-- Denotes less than 1 percent.

James K. Sands  
State Statistician

Carmen Rost  
Agricultural Statistician



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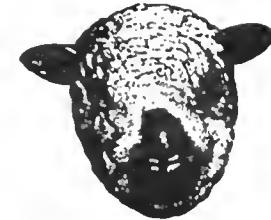


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# **MONTANA SHEEP & LAMB LOSSES--1993**



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Montana sheep producers lost 108,000 sheep and lambs to all causes during 1993, representing a total value of \$5.1 million, according to a survey conducted by the Montana Agricultural Statistics Service. Total head lost declined 4 percent from 1992, but the value of those losses increased more than \$.4 million.

Predators caused \$1.8 million in losses, while non-predator factors accounted for \$2.9 million and unknown causes claimed \$.4 million. The percentage of sheep and lamb losses due to predators remained the same as the previous year at 37 percent, however predator losses are up from 32 percent in 1989. Coyotes remained the single largest cause of death, resulting in a \$1.4 million loss. Coyotes accounted for 27 percent of the total value of death losses in the state. Non-predator losses accounted for 55 percent of all losses, down 1 point from the previous year.

Lambs losses by all predators amounted to 32,200 head, down 2 percent from last year. Lambs lost to weather, disease and other non-predator causes in 1993 totaled 36,100 head, down 11 percent from the previous year. Much of the decrease in predator and non-predator lamb losses was due to a 7 percent drop, 36,000 head, in lamb crop between 1992 and 1993.

Sheep killed by predators decreased 4 percent to total 8,000 head. Sheep losses to non-predator factors totaled 23,300, a 4 percent increase from 1992. A drop in sheep inventory, of 3 percent during 1993, was an important factor in the decreased predator losses.

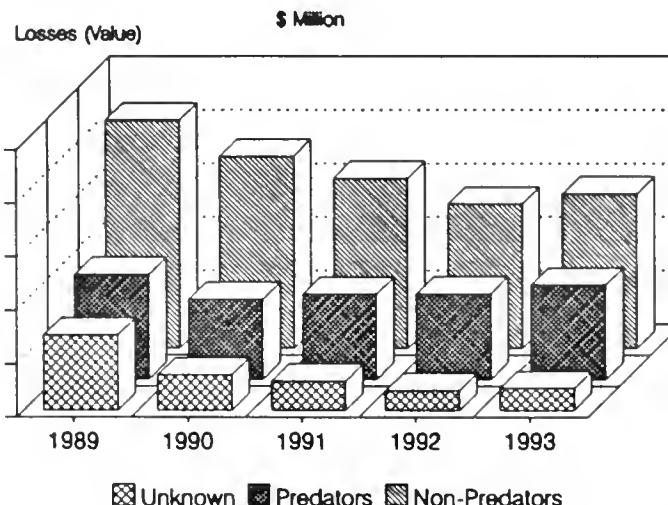
Lambs lost to unknown causes were up 34 percent to 4,700. Unknown causes claimed 3,700 head of sheep, down 14 percent from last year.

## **Sheep & Lamb Losses-1993**

### **Causes of Death**

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## METHODOLOGY and DEFINITIONS

The sheep and lamb loss survey utilized multi-frame sampling procedures. This involved drawing a random sample from a list of livestock producers maintained by the Montana Agricultural Statistics Service. In addition, sheep producers living in a selected sample of area segments were interviewed. This procedure assures complete coverage of sheep producers by accounting for ranchers/farmers who may not be on the list.

Sheep and lamb loss estimates published by the USDA include sheep losses for the entire year, but include only those lamb losses that occur after docking. This special report includes an estimate of lambs lost before docking as well.

## COOPERATION

This study was undertaken at the request of the Montana Wool Growers Association who also provided funding. The Montana Agricultural Statistics Service conducted the survey and expresses appreciation to all cooperating sheep producers.

Year	Jan. 1 Sheep & Lamb Inventory (000 head)	Lamb Crop (000 head)	DEATH LOSSES					All Sheep & Lamb Losses (000 hd.)	
			All Sheep Losses (000 head)	LAMBS (000 head)					
				Before Docking	After Docking	All Lambs			
1984	564	470	60	65	55	120	180.0		
1985	515	470	42	40	45	85	127.0		
1986	473	450	45	45	42	87	132.0		
1987	523	440	45	47	45	92	137.0		
1988	528	460	50	53	47	100	150.0		
1989	600	500	43	55	43	98	141.0		
1990	663	535	40	53	40	93	133.0		
1991	683	585	42	54	46	100	142.0		
1992	658	496	35	39	38	77	112.0		
1993	534	460	35	36	37	73	108.0		
Year	Predator Losses (000 head)	Non-Predator (000 head)	Unknown Causes (000 head)	VALUE OF LOSSES (000 dollars)				Total 1/	
				Predator	Non-Predator	Unknown	Total 1/		
1984	51.7	111.7	16.6	2,275.4	4,847.6	743.0	7,866.0		
1985	51.7	59.8	15.5	2,469.5	2,704.6	776.1	5,950.2		
1986	42.1	72.1	17.8	2,051.1	3,437.9	920.0	6,409.1		
1987	36.9	79.8	20.3	2,260.6	4,825.4	1,343.0	8,428.9		
1988	43.1	84.7	22.2	2,519.7	5,115.3	1,386.6	9,021.6		
1989	35.9	80.8	24.3	1,956.4	4,264.8	1,405.0	7,626.2		
1990	39.1	79.9	14.0	1,491.1	3,586.1	659.8	5,737.0		
1991	44.9	83.5	13.6	1,590.0	3,179.6	550.4	5,320.0		
1992	41.2	63.0	7.8	1,593.6	2,696.0	374.6	4,664.1		
1993	40.2	59.4	8.4	1,767.7	2,891.8	418.8	5,078.2		

1/ Totals may not add because of rounding.

# MONTANA SHEEP AND LAMB LOSSES BY CAUSE - 1992 and 1993

Cause of Loss	SHEEP LOSS				LAMB LOSS				TOTAL LOSS			
	Number of Head		Value in Dollars (000) 1/, 3/		Number of Head		Value in Dollars (000) 2/, 3/		Number of Head		Value in Dollars (000) 3/	
	1992	1993	1992	1993	1992	1993	1992	1993	1992	1993	1992	1993
Predators												
Fox	200	100	12.0	6.4	4,800	3,200	159.8	125.2	5,000	3,300	171.8	131.5
Dog	800	500	48.0	31.8	1,000	1,200	33.3	46.9	1,800	1,700	81.3	78.7
Coyote	6,600	6,200	396.0	393.7	24,500	24,500	815.9	958.4	31,100	30,700	1,211.9	1,352.1
Eagle	100	200	6.0	12.7	1,800	2,300	60.0	90.0	1,900	2,500	65.9	102.7
Bobcat	--	100		6.4	--	100		3.9	--	200		10.3
Bear	300	500	18.0	31.8	500	200	16.7	7.8	800	700	34.7	39.6
Mountain Lion	300	400	18.0	25.4	300	600	10.0	23.5	600	1,000	28.0	48.9
Other Animals	--	--			--	100		3.9	--	100		3.9
Total Predators	8,300	8,000	498.0	508.0	32,900	32,200	1,095.6	1,259.7	41,200	40,200	1,593.6	1,767.7
Non-Predators												
Weather Conditions	1,700	1,300	102.0	82.6	10,200	10,700	339.7	418.6	11,900	12,000	441.7	501.1
Disease	3,600	5,200	216.0	330.2	8,700	7,200	289.7	281.7	12,300	12,400	505.7	611.9
Poison	1,200	1,700	72.0	108.0	800	600	26.6	23.5	2,000	2,300	98.6	131.4
Lambing Complications	3,500	2,800	210.0	177.8	13,100	12,900	436.2	504.7	16,600	15,700	646.2	682.5
On Back	2,100	2,700	126.0	171.5	200	300	6.7	11.7	2,300	3,000	132.7	183.2
Old Age	6,300	7,100	378.0	450.9					6,300	7,100	378.0	450.9
Theft	800	1,200	48.0	76.2	2,100	2,100	69.9	82.2	2,900	3,300	117.9	158.4
Other	3,200	1,300	192.0	82.6	5,500	2,300	183.2	90.0	8,700	3,600	375.2	172.5
Total Non-Predators	22,400	23,300	1,344.0	1,479.6	40,600	36,100	1,352.0	1,412.2	63,000	59,400	2,696.0	2,891.8
Unknown Causes	4,300	3,700	258.0	235.0	3,500	4,700	116.6	183.9	7,800	8,400	374.6	418.8
Total Loss	35,000	35,000	2,100.0	2,222.5	77,000	73,000	2,564.1	2,855.7	112,000	108,000	4,664.1	5,078.2

1/ Average reported value for Ewes 1+. 2/ Lamb values equal to market year average price received for lambs multiplied by an average weight of 60 pounds per lamb. 3/ Totals may not add due to rounding. -- Denotes less than 100 head.



**PERCENT OF TOTAL SHEEP and LAMB LOSSES BY CAUSE and SIZE OF FLOCK, MONTANA—1992-1993**

CAUSE OF LOSS	SIZE OF FLOCK													
	1-99		100-299		300-999		1000-2499		2500+		All Sizes			
1992	1993	1992	1993	1992	1993	1992	1993	1992	1993	1989	1990	1991	1992	1993
<b>Predators</b>														
Fox	2	1	2	2	4	4	7	8	9	1	3	4	4	4
Dog	2	2	4	2	1	4	—	—	1	1	2	1	2	2
Coyote	34	18	27	31	31	32	26	31	30	40	23	25	25	28
Eagle	1	1	1	2	1	3	3	6	4	2	2	2	1	2
Bobcat	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bear	—	1	—	—	1	—	—	—	2	2	1	—	—	1
Mountain Lion	—	3	—	1	—	1	—	—	2	2	—	1	—	1
Other Animals	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total Predators 1/	39	25	34	38	39	44	37	45	48	48	32	33	33	37
<b>Non-Predators</b>														
Weather Conditions	9	18	7	12	11	11	10	13	11	8	11	10	16	11
Disease	12	12	11	11	11	9	12	9	10	10	10	13	11	11
Poison	—	1	1	1	2	2	2	3	3	3	4	2	2	2
Lambing Complications	18	23	24	19	14	12	11	10	10	12	10	16	15	15
On Back	1	3	2	2	1	2	2	2	2	2	2	1	2	2
Old Age	5	6	5	5	5	5	3	3	3	4	4	6	3	6
Theft	—	1	1	1	2	1	6	4	3	--	2	2	3	3
Other	9	4	8	4	8	4	9	5	7	1	13	5	4	8
Total Non-Predators	53	68	59	55	54	46	55	49	47	40	56	55	57	56
Unknown Causes	8	7	7	7	7	10	8	6	5	12	12	12	8	7
Total Loss	100	100	100	100	100	100	100	100	100	100	100	100	100	100

1/ Totals may not add due to rounding. -- Denotes less than 1 percent.

James K. Sands  
State Statistician

Carmen Rost  
Agricultural Statistician



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# MONTANA SHEEP & LAMB LOSSES--1994

Released: FEBRUARY 1995

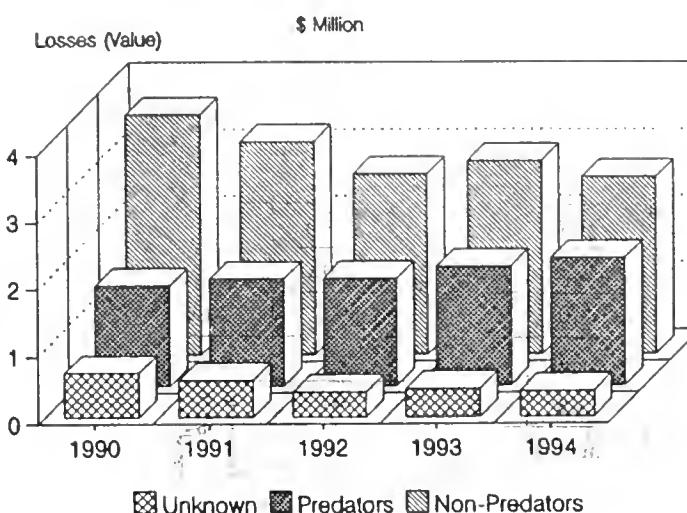
Montana sheep and lamb producers lost 104,000 animals to weather, predators, disease and other causes during 1994, representing a total value of \$4.9 million, according to a survey conducted by the Montana Agricultural Statistics Service. The total number of sheep and lambs lost was down 4 percent from 1993 and the total value of inventory lost in 1994 dropped 3 percent. The decline in sheep and lamb losses is partly due to the drop in total inventory which is down 6 percent from the previous year. Sheep and lamb deaths amounted to 10.1 percent of the January 1 inventory and lambs born, up fractionally from the previous year.

Predators caused an estimated \$1.9 million in losses in 1994 up from \$1.8 million the previous year. Losses due to predators amounted to 4.2 percent of the January 1 inventory and lambs born and 41 percent of all sheep and lamb deaths. Coyotes remained the largest predator and the largest cause of all deaths. The value of losses attributed to coyotes was \$1.3 million. The number of sheep and lambs lost to all predators totaled 42,900 head, up 2,700 head from last year. Coyotes accounted for 27 percent of all death losses in the state and 66 percent of all predator losses. Lamb losses by all predators amounted to 36,300 head, up 13 percent from last year. Most of the increase in lamb losses was due to an increase in fox and eagle losses. Lambs lost to eagles jumped 2,900 head while fox losses rose 2,700 head. The number of sheep lost to all predators totaled 6,600, down 18 percent. Coyotes caused the most sheep losses at 5,000 head.

The total value of non-predatory losses was \$2.6 million in 1994 down from \$2.9 million the previous year. Non-predatory losses accounted for 52 percent of all losses, down 3 points from 1993. There were 35,000 lambs lost to weather, disease and other non-predatory causes in 1994, down 3 percent from the previous year. The largest causes of lambs losses were weather and lambing complications, 9,900 head and 9,300 head, respectively. Sheep losses to non-predatory factors totaled 18,800, 19 percent decrease from 1993. Sheep lost to old age continued to be the largest non-predatory cause at 6,500 head, down 600 head from the previous year.

The value of sheep and lambs lost to unknown causes dropped 8 percent from last year to \$.4 million. Lambs lost to unknown causes were down 1,000 head to 3,700. Unknown causes claimed 3,600 sheep, down 100 head from last year.

## Sheep & Lamb Losses-1994 Causes of Death



## METHODOLOGY and DEFINITIONS

The sheep and lamb survey utilized multi-frame sampling procedures. The survey involved drawing a random sample from a list of livestock producers maintained by the Montana Agricultural Statistics Service. In addition, sheep producers living in a selected sample of area segments were interviewed. This procedure assures complete coverage of sheep producers by accounting for ranchers/farmers who may not be on the list. Sheep and lamb loss estimates published by the USDA include sheep losses for the entire year, but include only those lamb losses that occur after docking. This special report includes an estimate of lambs lost before docking as well.

## COOPERATION

This study was undertaken at the request of the Montana Wool Growers Association who also provided funding. The Montana Agricultural Statistics Service conducted the survey and expresses appreciation to all cooperating sheep producers.

Year	Jan. 1 Sheep & Lamb Inventory (000 head)	Lamb Crop (000 head)	DEATH LOSSES					
			All Sheep Losses (000 head)	LAMBS (000 head)			All Sheep & Lamb Losses (000 hd.)	
				Before Docking	After Docking	All Lambs	Total Loss	% Jan. 1 Inventory & Lambs Born
1985	615	470	42	40	45	85	127.0	11.3
1986	523	450	45	45	42	87	132.0	13.0
1987	563	440	45	47	45	92	137.0	13.0
1988	597	460	50	53	47	100	150.0	13.5
1989	600	500	43	55	43	98	141.0	12.2
1990	663	535	40	53	40	93	133.0	10.6
1991	683	585	42	54	46	100	142.0	10.7
1992	678	510	35	39	38	77	112.0	9.1
1993	564	480	35	36	37	73	108.0	10.0
1994	532	465	29	35	40	75	104.0	10.1
Year	Predator Losses (000 head)		Non- Predator Loss (000 hd)	Unknown Causes (000 head)	VALUE OF LOSSES (000 dollars)			
	Total Loss	% Jan. 1 Inventory & Lambs Born			Predator	Non- Predator	Unknown	Total 1/
1985	51.7	4.6	59.8	15.5	2,469.5	2,704.6	776.1	5,950.2
1986	42.1	4.1	72.1	17.8	2,051.1	3,437.9	920.0	6,409.1
1987	36.9	3.5	79.8	20.3	2,260.6	4,825.4	1,343.0	8,428.9
1988	43.1	3.9	84.7	22.2	2,519.7	5,115.3	1,386.6	9,021.6
1989	35.9	3.1	80.8	24.3	1,956.4	4,264.8	1,405.0	7,626.2
1990	39.1	3.1	79.9	14.0	1,491.1	3,586.1	659.8	5,737.0
1991	44.9	3.4	83.5	13.6	1,590.0	3,179.6	550.4	5,320.0
1992	41.2	3.4	63.0	7.8	1,593.6	2,696.0	374.6	4,664.1
1993	40.2	3.7	59.4	8.4	1,767.7	2,891.8	418.8	5,078.2
1994	42.9	4.2	53.8	7.3	1,897.0	2,649.9	386.6	4,933.5

1/ Totals may not add because of rounding.

# MONTANA SHEEP AND LAMB LOSSES BY CAUSE - 1993 and 1994

Cause of Loss	SHEEP LOSS				LAMB LOSS				TOTAL LOSS			
	Number of Head		Value in Dollars (000) 1/, 3/		Number of Head		Value in Dollars (000) 2/, 3/		Number of Head		Value in Dollars (000) 3/	
	1993	1994	1993	1994	1993	1994	1993	1994	1993	1994	1993	1994
<b>Predators</b>												
Fox	100	100	6.4	6.6	3,200	5,900	125.2	237.5	3,300	6,000	131.5	244.1
Dog	500	500	31.8	33.0	1,200	500	46.9	20.1	1,700	1,000	78.7	53.1
Coyote	6,200	5,000	393.7	330.0	24,500	23,500	958.4	946.1	30,700	28,500	1,352.1	1,276.1
Eagle	200	100	12.7	6.6	2,300	5,200	90.0	209.4	2,500	5,300	102.7	216.0
Bobcat	100	200	6.4	13.2	100	100	3.9	4.0	200	300	10.3	17.2
Bear	500	200	31.8	13.2	200	400	7.8	16.1	700	600	39.6	29.3
Mountain Lion	400	400	25.4	26.4	600	600	23.5	24.2	1,000	1,000	48.9	50.6
Wolves	5/	--	5/	5/	100	100	5/	4.0	5/	100	5/	4.0
Other Animals	--	100	6.6	100			3.9		100	100	3.9	6.6
<b>Total Predators</b>	<b>8,000</b>	<b>6,600</b>	<b>508.0</b>	<b>435.6</b>	<b>32,200</b>	<b>36,300</b>	<b>1,259.7</b>	<b>1,461.4</b>	<b>40,200</b>	<b>42,900</b>	<b>1,767.7</b>	<b>1,897.0</b>
<b>Non-Predators</b>												
Digestive	5/	1,100	5/	72.6	5/	4,200	5/	169.1	5/	5,300	5/	241.7
Respiratory	5/	1,400	5/	92.4	5/	5,100	5/	205.3	5/	6,500	5/	297.7
Metabolic	5/	600	5/	39.6	5/	1,400	5/	56.4	5/	2,000	5/	96.0
Other Diseases	5/	1,400	5/	92.4	5/	500	5/	20.1	5/	1,900	5/	112.5
All Diseases 4/	<b>5,200</b>	<b>4,500</b>	<b>330.2</b>	<b>297.0</b>	<b>7,200</b>	<b>11,200</b>	<b>281.7</b>	<b>450.9</b>	<b>12,400</b>	<b>15,700</b>	<b>611.9</b>	<b>747.9</b>
Weather												
Conditions	1,300	1,900	82.6	125.4	10,700	9,900	418.6	398.6	12,000	11,800	501.1	524.0
Poison	1,700	1,400	108.0	92.4	600	800	23.5	32.2	2,300	2,200	131.4	124.6
Lambing Complications	2,800	1,400	177.8	92.4	12,900	9,300	504.7	374.4	15,700	10,700	682.5	466.8
On Back	2,700	1,800	171.5	118.8	300	100	11.7	4.0	3,000	1,900	183.2	122.8
Old Age	7,100	6,500	450.9	429.0					7,100	6,500	450.9	429.0
Theft	1,200	700	76.2	46.2	2,100	2,200	82.2	88.6	3,300	2,900	158.4	134.8
Other	1,300	600	82.6	39.6	2,300	1,500	90.0	60.4	3,600	2,100	172.5	100.0
<b>Total Non-Predators</b>	<b>23,300</b>	<b>18,800</b>	<b>1,479.6</b>	<b>1,240.8</b>	<b>36,100</b>	<b>35,000</b>	<b>1,412.2</b>	<b>1,409.1</b>	<b>59,400</b>	<b>53,800</b>	<b>2,891.8</b>	<b>2,649.9</b>
<b>Unknown Causes</b>	<b>3,700</b>	<b>3,600</b>	<b>235.0</b>	<b>237.6</b>	<b>4,700</b>	<b>3,700</b>	<b>183.9</b>	<b>149.0</b>	<b>8,400</b>	<b>7,300</b>	<b>418.8</b>	<b>386.6</b>
<b>Total Loss</b>	<b>35,000</b>	<b>29,000</b>	<b>2,222.5</b>	<b>1,914.0</b>	<b>73,000</b>	<b>75,000</b>	<b>2,855.7</b>	<b>3,019.5</b>	<b>108,000</b>	<b>104,000</b>	<b>5,078.2</b>	<b>4,933.5</b>

1/ Average reported value for Ewes 1+. 2/ Lamb values equal to market year average price received for lambs multiplied by an average weight of 60 pounds per lamb. 3/ Totals may not add due to rounding. 4/ Beginning in 1994, diseases broken into categories. 5/ Not Available. -- Denotes less than 100 head.



**PERCENT OF TOTAL SHEEP and LAMB LOSSES BY CAUSE and SIZE OF FLOCK, MONTANA--1993-1994**

CAUSE OF LOSS	SIZE OF FLOCK														
	1-99		100-299		300-999		1000-2499		2500+		All Sizes				
Predators	1993	1994	1993	1994	1993	1994	1993	1994	1993	1994	1990	1991	1992	1993	1994
Fox	1	1	2	4	4	5	8	11	1	6	4	4	4	3	6
Dog	2	3	2	2	4	1	--	1	1	--	1	2	2	2	1
Coyote	18	19	31	25	32	37	31	25	40	33	25	25	28	28	27
Eagle	1	1	2	1	3	3	6	11	2	7	2	1	2	2	5
Bobcat	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bear	1	1	--	1	--	--	--	--	2	1	--	--	1	1	1
Mountain Lion	3	--	1	1	1	--	--	1	2	2	1	--	1	1	1
Wolves	4/	--	4/	--	4/	--	4/	--	4/	--	4/	4/	4/	4/	--
Other Animals	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Predators 1/	25	25	38	34	44	47	45	49	48	50	33	33	37	37	41
Non-Predators															
Digestive	4/	8	4/	10	4/	4	4/	4	4/	3	4/	4/	4/	4/	5
Respiratory	4/	9	4/	10	4/	5	4/	4	4/	6	4/	4/	4/	4/	6
Metabolic	4/	2	4/	2	4/	1	4/	3	4/	1	4/	4/	4/	4/	2
Other Diseases	4/	1	4/	1	4/	--	4/	2	4/	2	4/	4/	4/	4/	2
All Diseases 2/	12	20	11	23	9	10	9	13	10	12	13	11	11	11	15
Weather Conditions	18	10	12	16	11	13	13	10	8	11	10	16	11	11	11
Poison	1	--	1	1	2	1	3	3	3	1	2	2	2	2	2
Lambing Complications	23	19	19	12	12	10	10	7	12	10	16	15	15	15	10
On Back	3	1	2	1	2	1	2	2	2	1	1	2	2	3	2
Old Age	6	9	5	5	5	4	3	4	4	3	6	3	6	7	6
Theft	1	--	1	--	1	2	4	5	--	5	2	3	3	3	3
Other	4	9	4	3	4	2	5	1	1	1	5	4	8	3	2
Total Non-Predators	68	67	55	61	46	46	49	44	40	44	55	57	56	55	52
Unknown Causes	7	8	7	5	10	7	6	7	12	6	12	8	7	8	7
Total Loss	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

1/ Totals may not add due to rounding. 2/ Beginning in 1994, diseases broken into categories. 4/ Not Available.

-- Denotes less than 1 percent.

James K. Sands  
State Statistician

Carmen Rost  
Agricultural Statistician



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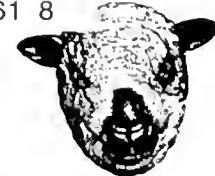
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# MONTANA SHEEP & LAMB LOSSES--1995



Released: FEBRUARY 1996

Montana sheep & lamb producers lost 92,000 animals to weather, predators, disease and other causes during 1995, representing a total value of \$5.3 million, according to a survey conducted by the Montana Agricultural Statistics Service. The total number of sheep and lambs lost was down 12 percent from 1994 but the total value of inventory lost in 1995 rose 8 percent. Higher market prices this past year resulted in an increased value of sheep and lambs. The decline in sheep and lamb losses is partly due to the drop in total inventory which is down 8 percent from the previous year. Sheep and lamb deaths amounted to 9.9 percent of the January 1 inventory and lambs born, slightly lower than the previous year.

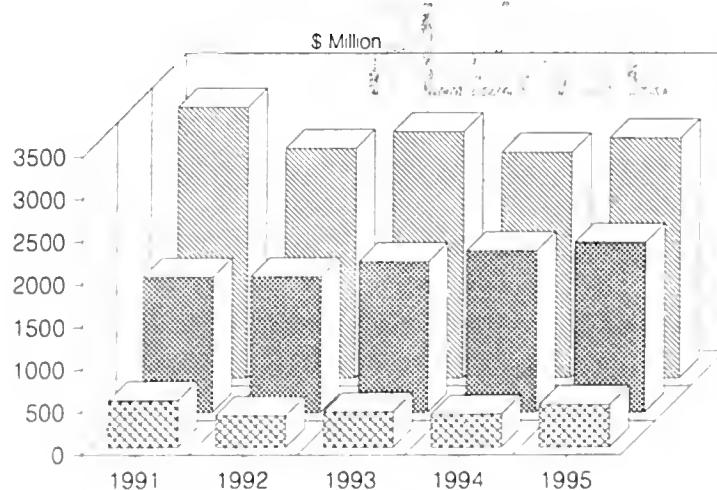
Predators caused an estimated \$2.0 million in losses in 1995 up from \$1.9 million the previous year. Losses due to predators amounted to 4.0 percent of the January 1 inventory and lambs born and 40 percent of all sheep and lamb deaths. Coyotes remained the largest predator and the largest cause of all deaths. The value of losses attributed to coyotes was \$1.5 million. The number of sheep and lambs lost to all predators totaled 37,100 head, down 5,800 head from last year. Coyotes accounted for 30 percent of all death losses in the state and 75 percent of all predator losses. Lamb losses by all predators amounted to 31,400 head, down 14 percent from last year. Most of the decrease in lamb losses was due to a fall in fox and eagle losses. Lambs lost to eagles dropped 2,700 head while fox losses declined 2,500 head. The number of sheep lost to all predators totaled 5,700, down 14 percent. The largest cause of sheep losses was coyotes at 4,400 head.

The total value of non-predatory losses was \$2.8 million in 1995 up from \$2.6 million the previous year. Non-predatory losses accounted for 51 percent of all losses. There were 30,900 head of lambs lost to weather, disease and other non-predatory causes in 1995, down 12 percent from the previous year. The largest causes of lambs losses were weather conditions at 12,700 head. Adverse weather conditions resulted in a number of producers losing more newborn lambs than the previous year. Sheep losses to non-predatory factors totaled 16,000, 15 percent lower than 1994. Sheep lost to old age continued to be the largest non-predatory cause at 5,700 head, down 800 head from the previous year.

The value of sheep and lambs lost to unknown causes jumped 29 percent from last year to \$.5 million. Lambs lost to unknown causes were up 1,000 head to 4,700. Unknown causes claimed 3,300 sheep, 300 head fewer than last year.

## Sheep & Lamb Losses-1995 Causes of Death

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## METHODOLOGY and DEFINITIONS

The sheep and lamb survey utilized multi-frame sampling procedures. The survey involved drawing a random sample from a list of livestock producers maintained by the Montana Agricultural Statistics Service. In addition, sheep producers living in a selected sample of area segments were interviewed. This procedure assures complete coverage of sheep producers by accounting for ranchers/farmers who may not be on the list.

Sheep and lamb loss estimates published by the USDA include sheep losses for the entire year, but include only those lamb losses that occur after docking. This special report includes an estimate of lambs lost before docking as well.

## COOPERATION

This study was undertaken at the request of the Montana Wool Growers Association who also provided funding. The Montana Agricultural Statistics Service conducted the survey and expresses appreciation to all cooperating sheep producers.

## SHEEP & LAMBS: Inventory, Death Losses, and Value of Losses, Montana, 1986-1995

Year	Jan. 1 Sheep & Lamb Inventory (000 head)	Lamb Crop (000 head)	DEATH LOSSES					
			All Sheep Losses (000 head)	LAMBS (000 head)			All Sheep & Lamb Losses (000 hd.)	
				Before Docking	After Docking	All Lambs	Total Loss	% Jan. 1 Inventory & Lambs Born 1/
1986	523	450	45	45	42	87	132.0	13.0
1987	563	440	45	47	45	92	137.0	13.0
1988	597	460	50	53	47	100	150.0	13.5
1989	600	500	43	55	43	98	141.0	12.2
1990	663	535	40	53	40	93	133.0	10.6
1991	683	585	42	54	46	100	142.0	10.7
1992	678	510	35	39	38	77	112.0	9.1
1993	564	480	35	36	37	73	108.0	10.0
1994	534	465	29	35	40	75	104.0	10.1
1995	490	410	25	34	33	67	92.0	9.9
Year	Predator Losses (000 head)		Non- Predator Loss (000 head)	Unknown Causes (000 head)	VALUE OF LOSSES (000 dollars)			
	Total Loss	% Jan. 1 Inventory & Lambs Born 1/			Predator	Non- Predator	Unknown	Total 2/
1986	42.1	4.1	72.1	17.8	2,051.1	3,437.9	920.0	6,409.1
1987	36.9	3.5	79.8	20.3	2,260.6	4,825.4	1,343.0	8,428.9
1988	43.1	3.9	84.7	22.2	2,519.7	5,115.3	1,386.6	9,021.6
1989	35.9	3.1	80.8	24.3	1,956.4	4,264.8	1,405.0	7,626.2
1990	39.1	3.1	79.9	14.0	1,491.1	3,586.1	659.8	5,737.0
1991	44.9	3.4	83.5	13.6	1,590.0	3,179.6	550.4	5,320.0
1992	41.2	3.4	63.0	7.8	1,593.6	2,696.0	374.6	4,664.1
1993	40.2	3.7	59.4	8.4	1,767.7	2,891.8	418.8	5,078.2
1994	42.9	4.1	53.8	7.3	1,897.0	2,649.9	386.6	4,933.5
1995	37.1	4.0	46.9	8.0	2,001.0	2,821.2	500.1	5,322.3

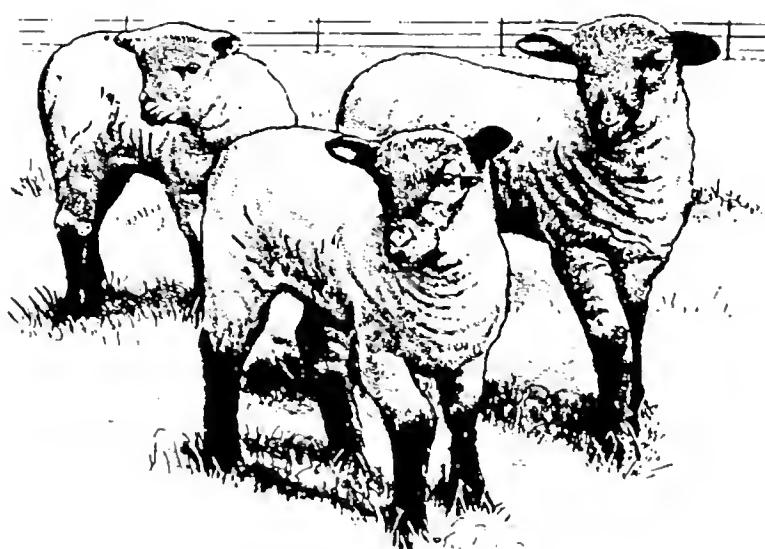
1/ Lambs born equals lamb crop plus lambs lost before docking.

2/ Totals may not add because of rounding.

## SHEEP & LAMBS: Losses by Cause, Montana, 1994-1995

Cause of Loss	SHEEP LOSS				LAMB LOSS				TOTAL LOSS			
	Number of Head		Value in Dollars (000) 1/, 3/		Number of Head		Value in Dollars (000) 2/, 3/		Number of Head		Value in Dollars (000) 3/	
	1994	1995	1994	1995	1994	1995	1994	1995	1994	1995	1994	1995
<b>Predators</b>												
Fox	100	--	6.6	--	5,900	3,400	237.5	166.1	6,000	3,400	244.1	166.1
Dog	500	700	33.0	57.4	500	900	20.1	44.0	1,000	1,600	53.1	101.4
Coyote	5,000	4,400	330.0	360.8	23,500	23,600	946.1	1,152.6	28,500	28,000	1,276.1	1,513.4
Eagle	100	200	6.6	16.4	5,200	2,500	209.4	122.1	5,300	2,700	216.0	138.5
Bobcat	200	--	13.2	--	100	--	4.0	--	300	--	17.2	--
Bear	200	100	13.2	8.2	400	200	16.1	9.8	600	300	29.3	18.0
Mountain Lion	400	200	26.4	16.4	600	300	24.2	14.7	1,000	500	50.6	31.1
Other Animals	100	--	6.6	--	100	--	4.0	--	200	--	10.6	--
Unknown												
Predators	4/	100	4/	8.2	4/	500	4/	24.4	4/	600	4/	32.6
<b>Total Predators</b>	<b>6,600</b>	<b>5,700</b>	<b>435.6</b>	<b>467.4</b>	<b>36,300</b>	<b>31,400</b>	<b>1,461.4</b>	<b>1,533.6</b>	<b>42,900</b>	<b>37,100</b>	<b>1,897.0</b>	<b>2,001.0</b>
<b>Non-Predators</b>												
All Diseases	4,500	2,800	297.0	229.6	11,200	7,200	450.9	351.6	15,700	10,000	747.9	581.2
Weather Conditions	1,900	1,600	125.4	131.2	9,900	12,700	398.6	620.3	11,800	14,300	524.0	751.5
Poison	1,400	1,500	92.4	123.0	800	400	32.2	19.5	2,200	1,900	124.6	142.5
Lambing Complications	1,400	1,300	92.4	106.6	9,300	7,100	374.4	346.8	10,700	8,400	466.8	453.4
On Back	1,800	1,200	118.8	98.4	100	--	4.0	--	1,900	1,200	122.8	98.4
Old Age	6,500	5,700	429.0	467.4					6,500	5,700	429.0	467.4
Theft	700	1,000	46.2	82.0	2,200	1,000	88.6	48.8	2,900	2,000	134.8	130.8
Other	600	900	39.6	73.8	1,500	2,500	60.4	122.1	2,100	3,400	100.0	195.9
<b>Total Non-Predators</b>	<b>18,800</b>	<b>16,000</b>	<b>1,240.8</b>	<b>1,312.0</b>	<b>35,000</b>	<b>30,900</b>	<b>1,409.1</b>	<b>1,509.2</b>	<b>53,800</b>	<b>46,900</b>	<b>2,649.9</b>	<b>2,821.2</b>
<b>Unknown Causes</b>	<b>3,600</b>	<b>3,300</b>	<b>237.6</b>	<b>270.6</b>	<b>3,700</b>	<b>4,700</b>	<b>149.0</b>	<b>229.5</b>	<b>7,300</b>	<b>8,000</b>	<b>386.6</b>	<b>500.1</b>
<b>Total Loss</b>	<b>29,000</b>	<b>25,000</b>	<b>1,914.0</b>	<b>2,050.0</b>	<b>75,000</b>	<b>67,000</b>	<b>3,019.5</b>	<b>3,272.3</b>	<b>104,000</b>	<b>92,000</b>	<b>4,933.5</b>	<b>5,322.3</b>

1/ Average reported value for Ewes 1+. 2/ Lamb values equal to market year average price received for lambs multiplied by an average weight of 60 pounds per lamb. 3/ Totals may not add due to rounding. 4/ Data not available. -- Denotes less than 100 head.



SHEEP & LAMBS: Percent of Losses By Cause and Size of Flock, Montana, 1994-1995

CAUSE OF LOSS	SIZE OF FLOCK										
	1-99		100-999		1000+		All Sizes				
Predators	1994	1995	1994	1995	1994	1995	1991	1992	1993	1994	1995
Fox	1	--	5	3	9	6	4	4	3	6	4
Dog	3	6	1	2	--	--	2	2	2	1	2
Coyote	19	17	32	31	29	28	25	28	28	27	30
Eagle	1	1	2	3	9	4	1	2	2	5	3
Bobcat	--	--	--	--	--	--	--	--	--	--	--
Bear	1	1	--	--	1	--	--	1	1	1	--
Mountain Lion	--	1	1	1	1	--	--	1	1	1	1
Other Animals	--	1	--	--	--	--	--	--	--	--	--
Unknown Predators	2/	1	2/	1	2/	--	2/	2/	2/	2/	1
Total Predators 1/	25	27	42	41	49	40	33	37	37	41	40
Non-Predators											
All Diseases	19	12	16	13	13	9	11	11	11	15	10
Weather Conditions	10	20	14	14	10	18	16	11	11	11	16
Poison	--	1	1	1	2	3	2	2	2	2	2
Lambing Complications	19	15	11	10	8	7	15	15	15	10	9
On Back	1	1	1	1	1	1	2	2	3	2	1
Old Age	9	5	5	6	3	4	3	6	7	6	6
Theft	--	--	1	1	5	4	3	3	3	3	2
Other	9	10	2	4	1	4	4	8	3	2	4
Total Non-Predators	67	62	52	50	44	49	57	56	55	52	50
Unknown Causes	8	12	6	8	7	11	8	7	8	7	10
Total Loss 1/	100	100	100	100	100	100	100	100	100	100	100

1/ Totals may not add due to rounding. 2/ Not available. -- Denotes less than 1 percent.

Peggy Stringer  
State Statistician

Carmen Rost  
Agricultural Statistician



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# MONTANA SHEEP & LAMB LOSSES--1996

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Released: FEBRUARY 14, 1997

MAR 04 1997

Montana sheep and lamb producers lost 83,000 animals to weather, predators, disease, and other causes during 1996, representing a total value of \$5.4 million, according to a survey conducted by the Montana Agricultural Statistics Service. The total number of sheep and lambs lost was down 10 percent from 1995, but the total value of inventory lost in 1996 rose 1 percent. High market prices this past year resulted in an increased value of sheep and lambs. The decline in sheep and lamb losses is partly due to the drop in total inventory which is down 5 percent from the previous year.

There were comments by producers saying that they are downsizing their flocks or getting out of the sheep business entirely due to predator problems and/or fluctuating prices in the market. Sheep and lamb deaths amounted to 9.4 percent of the January 1 inventory and lambs born--slightly lower than the previous year.

Predators caused an estimated \$1.9 million in losses in 1996 down from \$2.0 million the previous year. Losses due to predators amounted to 3.5 percent of the January 1 inventory and lambs born, slightly lower than the 10 year average of 3.6 percent. Predators accounted for 38 percent of all sheep and lamb deaths.

Coyotes remained the largest predator and the largest cause of all deaths. The value of losses attributed to coyotes was \$1.4

million. The number of sheep and lambs lost to all predators totaled 31,200 head, down 5,900 head from last year. Coyotes accounted for 27 percent of all death losses in the state and 72 percent of all predator losses. Lamb losses by all predators amounted to 26,200 head, down 17 percent from last year. Most of the decrease in lamb losses was due to a decline in coyote losses. Lambs lost to coyotes dropped 4,500 head. The number of sheep lost to all predators totaled 5,000, down 700 head from a year ago. The largest cause of sheep losses by predators was coyotes at 3,500 head.

The total value of non-predatory losses was \$2.6 million in 1996--lower than the \$2.8 million the previous year. Non-predatory losses accounted for 47 percent of all losses. There were 27,400 head of lambs lost to weather, disease and

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other non-predatory causes in

1996, down 11 percent from a year ago. The largest non-predatory cause of lamb losses was weather conditions at 12,900 head.

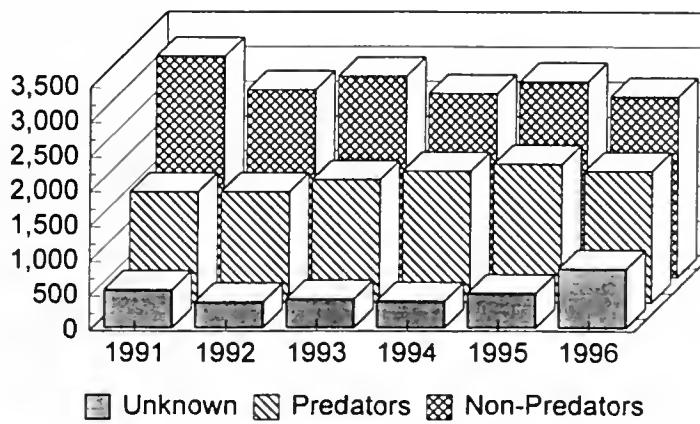
Sheep losses to non-predatory factors totaled 11,800, 26 percent lower than 1995. Sheep lost to old age continued to be the largest cause at 4,500 head, down 1,200 head from the previous year.

A large number of producers reported sheep and lambs lost to unknown causes this past year, resulting in a 58 percent increase. Lambs lost to unknown causes were up 3,700 head to 8,400 head. Unknown causes claimed 4,200 sheep, 900 more head than last year. The value of sheep and lambs lost to unknown causes increased \$.4 million to \$.9 million.

## Sheep & Lamb Losses - 1996

### Causes of Death

(000) Dollars



## METHODOLOGY and DEFINITIONS

The sheep and lamb survey utilized multi-frame sampling procedures. The survey involved drawing a random sample from a list of livestock producers maintained by the Montana Agricultural Statistics Service. In addition, sheep producers living in a selected sample of area segments were interviewed. This procedure assures complete coverage of

sheep producers by accounting for ranchers/farmers who may not be on the list.

Sheep and lamb loss estimates published by the USDA include sheep losses for the entire year, but include only those lamb losses that occur after docking. This special report includes an estimate of lambs lost before docking as well.

## COOPERATION

This study was undertaken at the request of the Montana Wool Growers Association who also provided funding. The Montana Agricultural Statistics Service conducted the survey and expresses appreciation to all cooperating sheep producers.

### SHEEP & LAMBS: Inventory, Death Losses, and Value of Losses, Montana, 1986-1996

Year	Jan. 1 Sheep & Lamb Inventory (000 head)	Lamb Crop (000 head)	DEATH LOSSES					
			All Sheep Losses (000 head)	LAMBS (000 head)			All Sheep & Lamb Losses (000 hd.)	
				Before Docking	After Docking	All Lambs	Total Loss	% Jan. 1 Inventory & Lambs Born 1/
1986	523	450	45	45	42	87	132.0	13.0
1987	563	440	45	47	45	92	137.0	13.0
1988	597	460	50	53	47	100	150.0	13.5
1989	600	500	43	55	43	98	141.0	12.2
1990	663	535	40	53	40	93	133.0	10.6
1991	683	585	42	54	46	100	142.0	10.7
1992	678	510	35	39	38	77	112.0	9.1
1993	564	480	35	36	37	73	108.0	10.0
1994	534	465	29	35	40	75	104.0	10.1
1995	490	410	25	34	33	67	92.0	9.9
1996	465	390	21	30	32	62	83.0	9.4

Year	Predator Losses (000 Head)		Non-Predator Loss (000 hd.)	Unknown Causes (000 head)	VALUE OF LOSSES (000 dollars)			
	Total Loss	% Jan. 1 Inventory & Lambs Born 1/			Predator	Non-Predator	Unknown	Total 2/
1986	42.1	4.1	72.1	17.8	2,051.1	3,437.9	920.0	6,409.1
1987	36.9	3.5	79.8	20.3	2,260.6	4,825.4	1,343.0	8,428.9
1988	43.1	3.9	84.7	22.2	2,519.7	5,115.3	1,386.6	9,021.6
1989	35.9	3.1	80.8	24.3	1,956.4	4,264.8	1,405.0	7,626.2
1990	39.1	3.1	79.9	14.0	1,491.1	3,586.1	659.8	5,737.0
1991	44.9	3.4	83.5	13.6	1,590.0	3,179.6	550.4	5,320.0
1992	41.2	3.4	63.0	7.8	1,593.6	2,696.0	374.6	4,664.1
1993	40.2	3.7	59.4	8.4	1,767.7	2,891.8	418.8	5,078.2
1994	42.9	4.1	53.8	7.3	1,897.0	2,649.9	386.6	4,933.5
1995	37.1	4.0	46.9	8.0	2,001.0	2,821.2	500.1	5,322.3
1996	31.2	3.5	39.2	12.6	1,902.1	2,606.9	853.9	5,362.9

1/ Lambs born equals lamb crop plus lambs lost before docking.

2/ Totals may not add because of rounding.

# SHEEP & LAMBS: Losses by Cause, Montana, 1995-1996

Cause of Loss	SHEEP LOSS				LAMB LOSS				TOTAL LOSS			
	Number of Head		Value in Dollars (000) 1/, 3/		Number of Head		Value in Dollars (000) 2/, 3/		Number of Head		Value in Dollars (000) 3/	
	1995	1996	1995	1996	1995	1996	1995	1996	1995	1996	1995	1996
<b>Predators</b>												
Fox	--	100	--	9.4	3,400	2,600	166.1	142.1	3,400	2,700	166.1	151.5
Dog	700	400	57.4	37.6	900	1,000	44.0	54.7	1,600	1,400	101.4	92.3
Coyote	4,400	3,500	360.8	329.0	23,600	19,100	1,152.6	1,044.0	28,000	22,600	1,513.4	1,373.0
Eagle	200	200	16.4	18.8	2,500	2,000	122.1	109.3	2,700	2,200	138.5	128.1
Bobcat	--	100	--	9.4	--	100	--	5.5	--	200	--	14.9
Bear	100	300	8.2	28.2	200	500	9.8	27.3	300	800	18.0	55.5
Mountain Lion	200	200	16.4	18.8	300	300	14.7	16.4	500	500	31.1	35.2
Other Animals	--	--	--	--	--	--	--	--	--	--	--	--
Unknown												
Predators	100	200	8.2	18.8	500	600	24.4	32.8	600	800	32.6	51.6
<b>Total Predators</b>	<b>5,700</b>	<b>5,000</b>	<b>467.4</b>	<b>470.0</b>	<b>31,400</b>	<b>26,200</b>	<b>1,533.6</b>	<b>1,432.1</b>	<b>37,100</b>	<b>31,200</b>	<b>2,001.0</b>	<b>1,902.1</b>
<b>Non-Predators</b>												
All Diseases	2,800	1,800	229.6	169.2	7,200	4,900	351.6	267.8	10,000	6,700	581.2	437.0
Weather Conditions	1,600	1,600	131.2	150.4	12,700	12,900	620.3	705.1	14,300	14,500	751.5	855.5
Poison	1,500	600	123.0	56.4	400	700	19.5	38.3	1,900	1,300	142.5	94.7
Lambing Complications	1,300	1,100	106.6	103.4	7,100	5,500	346.8	300.6	8,400	6,600	453.4	404.0
On Back	1,200	1,200	98.4	112.8	--	--	--	--	1,200	1,200	98.4	112.8
Old Age	5,700	4,500	467.4	423.0					5,700	4,500	467.4	423.0
Theft	1,000	600	82.0	56.4	1,000	1,800	48.8	98.4	2,000	2,400	130.8	154.8
Other	900	400	73.8	37.6	2,500	1,600	122.1	87.5	3,400	2,000	195.9	125.1
<b>Total Non-Predators</b>	<b>16,000</b>	<b>11,800</b>	<b>1,312.0</b>	<b>1,109.2</b>	<b>30,900</b>	<b>27,400</b>	<b>1,509.2</b>	<b>1,497.7</b>	<b>46,900</b>	<b>39,200</b>	<b>2,821.2</b>	<b>2,606.9</b>
<b>Unknown Causes</b>	<b>3,300</b>	<b>4,200</b>	<b>270.6</b>	<b>394.8</b>	<b>4,700</b>	<b>8,400</b>	<b>229.5</b>	<b>459.1</b>	<b>8,000</b>	<b>12,600</b>	<b>500.1</b>	<b>853.9</b>
<b>Total Loss</b>	<b>25,000</b>	<b>21,000</b>	<b>2,050.0</b>	<b>1,974.0</b>	<b>67,000</b>	<b>62,000</b>	<b>3,272.5</b>	<b>3,388.9</b>	<b>92,000</b>	<b>83,000</b>	<b>5,322.3</b>	<b>5,362.9</b>

1/ Average reported value for Ewes 1+. 2/ Lamb values equal to market year average price received for lambs multiplied by an average weight of 60 pounds per lamb. 3/ Totals may not add due to rounding. -- Denotes less than 100 head.



**SHEEP & LAMBS: Percent of Losses By Cause and Size of Flock, Montana, 1995-1996**

Cause of Loss	Size of Flock										
	1-99		100-999		1000+		All Sizes				
Predators	1995	1996	1995	1996	1995	1996	1992	1993	1994	1995	1996
Fox	--	--	3	3	6	4	4	3	6	4	3
Dog	6	4	2	2	--	1	2	2	1	2	2
Coyote	17	16	31	32	28	27	28	28	27	30	27
Eagle	1	--	3	4	4	3	2	2	5	3	3
Bobcat	--	--	--	--	--	--	--	--	--	--	--
Bear	1	--	--	--	--	2	1	1	1	--	1
Mountain Lion	1	3	1	1	--	--	1	1	1	1	1
Other Animals	1	--	--	--	--	--	--	--	--	--	--
Unknown Predators	1	6	1	--	--	1	2/	2/	2/	1	1
Total Predators 1/	27	30	41	42	40	39	37	37	41	40	38
Non-Predators											
All Diseases	12	15	13	9	9	6	11	11	15	10	8
Weather Conditions	20	18	14	19	18	18	11	11	11	16	17
Poison	1	--	1	1	3	2	2	2	2	2	2
Lambing Complications	15	20	10	10	7	4	15	15	10	9	8
On Back	1	--	1	1	1	1	2	3	2	1	1
Old Age	5	4	6	5	4	4	6	7	6	6	5
Theft	--	--	1	1	4	4	3	3	3	2	3
Other	10	5	4	3	4	2	8	3	2	4	2
Total Non-Predators	62	62	50	50	49	42	56	55	52	50	47
Unknown Causes	12	9	8	7	11	19	7	8	7	10	15
Total Loss 1/	100	100	100	100	100	100	100	100	100	100	100

1/ Totals may not add due to rounding. 2/ Not available. -- Denotes less than 1 percent.

Peggy Stringer  
State Statistician

Carmen Pennington  
Agricultural Statistician





# MONTANA SHEEP & LAMB LOSSES--1997



Released: FEBRUARY 20, 1998

Montana sheep and lamb producers lost 85,000 animals to weather, predators, disease and other causes during 1997, representing a total value of \$6.0 million, according to a survey conducted by the Montana Agricultural Statistics Service. The total number of sheep and lambs lost increased 2 percent from 1996 and the total value of inventory lost in 1997 rose 12 percent. High market prices in 1997 increased the value of sheep and lambs. The increase in sheep and lamb losses is partly due to severe spring snow storms that hit the eastern part of the state. Total inventory is 7 percent lower than the previous year. Sheep and lamb deaths amounted to 10.1 percent of the January 1 inventory and lambs born -- slightly higher than the previous year.

Predators caused an estimated \$1.8 million in losses in 1997 down from \$1.9 million the previous year. Losses due to predators amounted to 3.2 percent of the January 1 inventory and lambs born and 32 percent of all sheep and lamb deaths. Coyotes remained the largest predator for both sheep and lambs. Coyotes accounted for 74 percent of the predator caused losses and 23 percent of all death losses in the state. The value of losses attributed to coyotes was \$1.3 million. The number of sheep and lambs lost to all predators totaled 27,000 head, down 4,200 head from last year. Lamb losses by all predators amounted to 22,400 head, down 15 percent from last

year. The number of sheep lost to all predators totaled 4,600, down 400 head from a year ago.

The total value of non-predatory losses was \$3.6 million in 1997 higher than the \$2.6 million the previous year. Non-predatory losses accounted for 58 percent of all losses, compared with 47 percent in 1996. The largest non-predatory cause of losses were weather conditions at 26,200 head.

There were comments by producers saying many had lost a large majority of their flocks in the April storms. Sheep losses to non-predatory factors totaled 17,800, 51 percent higher than 1996. Non-predatory lamb losses came in at 31,300 head, 14 percent higher than a year ago.

Fewer producers reported sheep and lambs lost to unknown causes

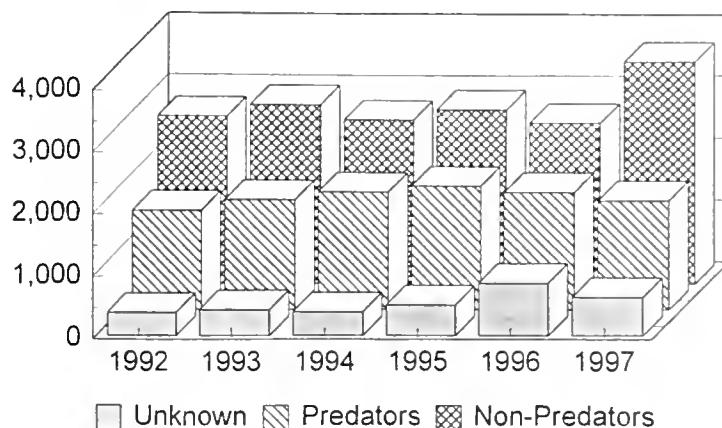
this past year. This resulted in the number of sheep and lambs lost to unknown causes to decrease 29 percent from last year. Lambs lost to unknown causes totaled 6,300 head, 2,100 head lower than 1996. Unknown causes claimed 2,600 sheep, 1,600 less head than last year. The value of sheep and lambs lost to unknown causes decreased \$.3 million to \$.6 million.

Of the livestock producers surveyed, 26 percent reported receiving assistance from a government trapper during 1997. 61.9 percent of the producers surveyed used one or more forms of non-lethal predator control practices. Guard animals were the most popular practice reported. 70.8 percent of these producers used guard animals and 82.6 of them reported the guard animals as being very effective.

## Sheep & Lamb Losses - 1997

### Causes of Death

(000) Dollars



## METHODOLOGY and DEFINITIONS

The sheep and lamb survey utilized multi-frame sampling procedures. The survey involved drawing a random sample from a list of livestock producers maintained by the Montana Agricultural Statistics Service. In addition, sheep producers living in a selected sample of area segments were interviewed. This procedure assures complete coverage of

sheep producers by accounting for ranchers/farmers who may not be on the list.

Sheep and lamb loss estimates published by the USDA include sheep losses for the entire year, but include only those lamb losses that occur after docking. This special report also includes an estimate of lambs lost before docking.

## OPERATION

This study was undertaken at the request of the Montana Wool Growers Association who also provided funding. Predator control questions were added to the survey at the request of Animal Damage Control (ADC). The Montana Agricultural Statistics Service conducted the survey and expresses appreciation to all cooperating sheep producers.

### SHEEP & LAMBS: Inventory, Death Losses, and Value of Losses, Montana, 1988-1997

Year	Jan. 1 Sheep & Lamb Inventory (000 head)	Lamb Crop (000 head)	DEATH LOSSES					
			All Sheep Losses (000 head)	LAMBS (000 head)			All Sheep & Lamb Losses (000 hd.)	
				Before Docking	After Docking	All Lambs	Total Loss	% Jan. 1 Inventory & Lambs Born 1/
1988	597	460	50	53	47	100	150.0	13.5
1989	600	500	43	55	43	98	141.0	12.2
1990	663	535	40	53	40	93	133.0	10.6
1991	683	585	42	54	46	100	142.0	10.7
1992	678	510	35	39	38	77	112.0	9.1
1993	564	480	35	36	37	73	108.0	10.0
1994	534	465	29	35	40	75	104.0	10.1
1995	490	410	25	34	33	67	92.0	9.9
1996	465	390	21	30	32	62	83.0	9.4
1997	432	380	25	32	28	60	85.0	10.1

Year	Predator Losses (000 Head)		Non-Predator Loss (000 hd.)	Unknown Causes (000 head)	VALUE OF LOSSES (000 dollars)			
	Total Loss	% Jan. 1 Inventory & Lambs Born 1/			Predator	Non-Predator	Unknown	Total 2/
1988	43.1	3.9	84.7	22.2	2,519.7	5,115.3	1,386.6	9,021.6
1989	35.9	3.1	80.8	24.3	1,956.4	4,264.8	1,405.0	7,626.2
1990	39.1	3.1	79.9	14.0	1,491.1	3,586.1	659.8	5,737.0
1991	44.9	3.4	83.5	13.6	1,590.0	3,179.6	550.4	5,320.0
1992	41.2	3.4	63.0	7.8	1,593.6	2,696.0	374.6	4,664.1
1993	40.2	3.7	59.4	8.4	1,767.7	2,891.8	418.8	5,078.2
1994	42.9	4.1	53.8	7.3	1,897.0	2,649.9	386.6	4,933.5
1995	37.1	4.0	46.9	8.0	2,001.0	2,821.2	500.1	5,322.3
1996	31.2	3.5	39.2	12.6	1,902.1	2,606.9	853.9	5,362.9
1997	27.0	3.2	49.1	8.9	1,769.8	3,598.9	627.1	5,995.8

1/ Lambs born equals lamb crop plus lambs lost before docking.

2/ Totals may not add because of rounding.

## SHEEP & LAMBS: Losses by Cause, Montana, 1996-1997

Cause of Loss	SHEEP LOSS				LAMB LOSS				TOTAL LOSS			
	Number of Head		Value in Dollars (000) 1/, 3/		Number of Head		Value in Dollars (000) 2/, 3/		Number of Head		Value in Dollars (000) 3/	
	1996	1997	1996	1997	1996	1997	1996	1997	1996	1997	1996	1997
Predators												
Fox	100	--	9.4	--	2,600	2,200	142.1	129.1	2,700	2,200	151.5	129.1
Dog	400	400	37.6	39.6	1,000	600	54.7	35.2	1,400	1,000	92.3	74.8
Coyote	3,500	3,500	329.0	346.5	19,100	16,400	1,044.0	962.4	22,600	19,900	1,373.0	1,308.9
Eagle	200	100	18.8	9.9	2,000	2,300	109.3	135.0	2,200	2,400	128.1	144.9
Bobcat	100	--	9.4	--	100	100	5.5	5.9	200	100	14.9	5.9
Bear	300	200	28.2	19.8	500	200	27.3	11.7	800	400	55.5	31.5
Mountain Lion	200	300	18.8	29.7	300	200	16.4	11.7	500	500	35.2	41.4
Other Animals	--	--	--	--	--	--	--	--	--	--	--	--
Unknown												
Predators	200	100	18.8	9.9	600	400	32.8	23.5	800	500	51.6	33.4
Total Predators	5,000	4,600	470.0	455.4	26,200	22,400	1,432.1	1,314.4	31,200	27,000	1,902.1	1,769.8
Non-Predators												
All Diseases	1,800	3,000	169.2	297.0	4,900	4,800	267.8	281.7	6,700	7,800	437.0	578.7
Weather Conditions	1,600	7,100	150.4	702.9	12,900	19,100	705.1	1,120.8	14,500	26,200	855.5	1,823.7
Poison	600	900	56.4	89.1	700	600	38.3	35.2	1,300	1,500	94.7	124.3
Lambing Complications	1,100	900	103.4	89.1	5,500	5,600	300.6	328.6	6,600	6,500	404.0	417.7
On Back	1,200	800	112.8	79.2	--	--	--	--	1,200	800	112.8	79.2
Old Age	4,500	4,100	423.0	405.9					4,500	4,100	423.0	405.9
Theft	600	800	56.4	79.2	1,800	500	98.4	29.3	2,400	1,300	154.8	108.5
Other	400	200	37.6	19.8	1,600	700	87.5	41.1	2,000	900	125.1	60.9
Total Non-Predators	11,800	17,800	1,109.2	1,762.2	27,400	31,300	1,497.7	1,836.7	39,200	49,100	2,606.9	3,598.9
Unknown Causes	4,200	2,600	394.8	257.4	8,400	6,300	459.1	369.7	12,600	8,900	853.9	627.1
Total Loss	21,000	25,000	1,974.0	2,475.0	62,000	60,000	3,388.9	3,520.8	83,000	85,000	5,362.9	5,995.8

1/ Average reported value for Ewes 1+. 2/ Lamb values equal to market year average price received for lambs multiplied by an average weight of 60 pounds per lamb. 3/ Totals may not add due to rounding. -- Denotes less than 100 head.

## Use and Effectiveness of Non-Lethal Predator Control Measures, Montana, 1997

Non-Lethal Predator Control Measures	Percent of Responses Using and Not Using Practice		Effectiveness Rating of those Reporting Use of Each Practice		
	Practice Used	Practice Not Used	Very Effective	Somewhat Effective	Not Effective
	Percent		Percent		
One or More Practices Used	61.9	38.1			
Fencing	32.2	67.8	54.2	34.6	11.2
Scaring Devices (fright tactics)	3.6	96.4	35.3	49.8	14.9
Guard Animals	70.8	29.2	82.6	14.9	2.5
Husbandry Practices:					
Herding, Gathering	27.0	73.0	88.5	11.2	.3
Night Penning	47.4	52.6	89.0	9.9	1.1
Shed Lambing	50.3	49.7	83.8	15.0	1.2
Move Livestock	11.6	88.4	34.8	56.5	8.7

SHEEP & LAMBS: Percent of Losses by Cause and Size of Flock, Montana, 1996-1

Cause of Loss	Size of Flock										
	1-99		100-999		1000+		All Sizes				
Predators	1996	1997	1996	1997	1996	1997	1993	1994	1995	1996	1997
Fox	--	--	3	2	4	4	3	6	4	3	3
Dog	4	1	2	2	1	--	2	1	2	2	1
Coyote	16	33	32	21	27	26	28	27	30	27	23
Eagle	--	--	4	2	3	5	2	5	3	3	3
Bobcat	--	--	--	--	--	--	--	--	--	--	--
Bear	--	--	--	--	2	1	1	1	--	1	--
Mountain Lion	3	--	1	--	--	1	1	1	1	1	1
Other Animals	--	--	--	--	--	--	--	--	--	--	--
Unknown Predators	6	--	--	1	1	1	2/	2/	1	1	1
Total Predators 1/	30	35	42	29	39	38	37	41	40	38	32
Non-Predators											
All Diseases	15	7	9	12	6	8	11	15	10	8	9
Weather Conditions	18	39	19	35	18	27	11	11	16	17	31
Poison	--	3	1	1	2	2	2	2	2	2	2
Lambing Complications	20	5	10	9	4	5	15	10	9	8	8
On Back	--	--	1	1	1	1	3	2	1	1	1
Old Age	4	3	5	5	4	3	7	6	6	5	5
Theft	--	--	1	--	4	3	3	3	2	3	2
Other	5	2	3	1	2	1	3	2	4	2	1
Total Non-Predators	62	60	50	65	42	50	55	52	50	47	58
Unknown Causes	9	5	7	7	19	13	8	7	10	15	10
Total Loss 1/	100	100	100	100	100	100	100	100	100	100	100

1/ Totals may not add due to rounding. 2/ Not available. -- Denotes less than 1 percent.

Peggy Stringer  
State Statistician

Carmen Pennington  
Agricultural Statistician



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Feb. 19, 1999  
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# MONTANA SHEEP & LAMB LOSSES--1998



STATE DOCUMENTS C. 1999

Released: February 19, 1999

Montana sheep and lamb producers lost 67,000 animals to weather, predators, disease and other causes during 1998, representing a total value of more than \$3.6 million, according to a survey conducted by the Montana Agricultural Statistics Service. The total number of sheep and lambs lost dropped 21 percent from 1997 and the total value of inventory lost in 1998 fell 39 percent. Extremely low market prices this past year resulted in a significant decrease in the value of sheep and lambs. The reduction in sheep and lamb losses is partly due to less severe weather in 1998 and lower sheep and lamb inventories which were 4 percent lower than the previous year. With sheep numbers declining there is a natural decline in sheep and lamb losses. The percentage of total sheep and lambs lost due to weather in 1998 is 62 percent less than 1997. Sheep and lamb deaths amounted to 8.4 percent of the January 1 inventory and lambs born -- slightly less than the previous year.

Predators caused an estimated \$1.1 million in losses in 1998, down from \$1.8 million the previous year. Losses due to predators amounted to 2.7 percent of the January 1, 1998 inventory plus the lambs born in 1998 and 33 percent of all sheep and lamb deaths. Coyotes remained the largest predator for both sheep and lambs. Coyotes accounted for 68 percent of the predator caused

losses and 22 percent of all death losses in the state. The value of losses attributed to coyotes was \$759,000. The number of sheep and lambs lost to all predators totaled 21,800 head, down 5,200 head from last year. Lamb losses by all predators amounted to 17,700 head, down 21 percent from last year. The number of sheep lost to all predators totaled 4,100, down 500 head from a year ago.

The total value of non-predatory losses was \$2.2 million in 1998, compared with \$3.6 million the previous year. Non-predatory losses accounted for 58 percent of all losses. The largest non-predatory cause of losses were weather conditions at 10,000 head.

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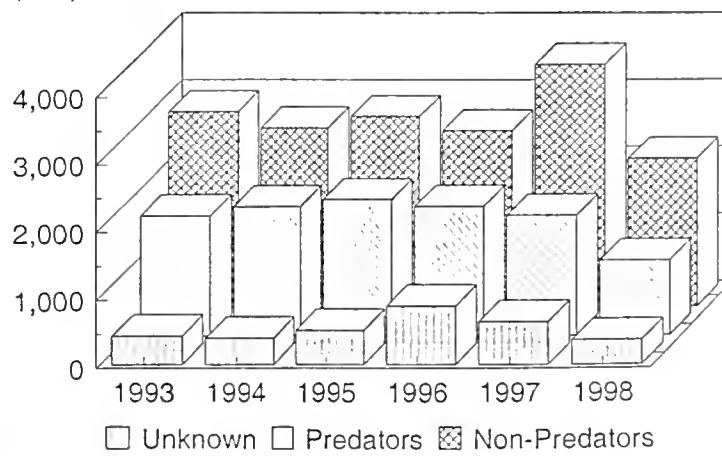
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HELENA, MONT.

Sheep lost to non-predatory factors totaled 13,800 head, 22 percent lower than 1997. Non-predatory lamb losses came in at 24,900 head, 20 percent lower than a year ago.

Fewer producers reported sheep and lambs lost to unknown causes. This resulted in a 27 percent decrease in the number of sheep and lambs lost to unknown causes from last year. Lambs lost to unknown causes totaled 4,400 head, 1,900 head lower than 1997. Unknown causes claimed 2,100 sheep, 500 less head than last year. The value of sheep and lambs lost to unknown causes decreased \$266,900 to \$360,200.

## Sheep & Lamb Losses - 1998 Causes of Death

(000) Dollars



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## Methodology and Definitions

The sheep and lamb survey utilized multi-frame sampling procedures. The survey involved drawing a random sample from a list of livestock producers maintained by the Montana Agricultural Statistics Service. In addition, sheep producers living in a selected sample of area segments were interviewed. This procedure assures complete coverage of

sheep producers by accounting for ranchers/farmers who may not be on the list.

Sheep and lamb loss estimates published by the USDA include sheep losses for the entire year, but include only those lamb losses that occur after docking. This special report also includes an estimate of lambs lost before docking.

## Cooperation

This study was undertaken at the request of the Montana Wool Growers Association who also provided funding. The Montana Agricultural Statistics Service conducted the survey and expresses appreciation to all cooperating sheep producers.

### Sheep & Lambs: Inventory, Death Losses, and Value of Losses, Montana, 1989-1998

Year	Jan. 1 Sheep & Lamb Inventory (000 head)	Lamb Crop (000 head)	DEATH LOSSES					% Jan. 1 Inventory & Lambs Born 1/	
			All Sheep Losses (000 head)	Lambs (000 head)			All Sheep & Lamb Losses		
				Before Docking	After Docking	All Lambs	Total Loss (000 head)		
1989	600	500	43	55	43	98	141.0	12.2	
1990	663	535	40	53	40	93	133.0	10.6	
1991	683	585	42	54	46	100	142.0	10.7	
1992	678	510	35	39	38	77	112.0	9.1	
1993	564	480	35	36	37	73	108.0	10.0	
1994	534	465	29	35	40	75	104.0	10.1	
1995	490	410	25	34	33	67	92.0	9.9	
1996	465	390	21	30	32	62	83.0	9.4	
1997	432	380	25	32	28	60	85.0	10.1	
1998	415	355	20	25	22	47	67.0	8.4	

Year	Predator Losses		Non-Predator Loss (000 head)	Unknown Causes (000 head)	Value of Losses (000 dollars)			
	Total Loss (000 head)	% Jan. 1 Inventory & Lambs Born 1/			Predator	Non-Predator	Unknown	Total 2/
1989	35.9	3.1	80.8	24.3	1,956.4	4,264.8	1,405.0	7,626.2
1990	39.1	3.1	79.9	14.0	1,491.1	3,586.1	659.8	5,737.0
1991	44.9	3.4	83.5	13.6	1,590.0	3,179.6	550.4	5,320.0
1992	41.2	3.4	63.0	7.8	1,593.6	2,696.0	374.6	4,664.1
1993	40.2	3.7	59.4	8.4	1,767.7	2,891.8	418.8	5,078.2
1994	42.9	4.1	53.8	7.3	1,897.0	2,649.9	386.6	4,933.5
1995	37.1	4.0	46.9	8.0	2,001.0	2,821.2	500.1	5,322.3
1996	31.2	3.5	39.2	12.6	1,902.1	2,606.9	853.9	5,362.9
1997	27.0	3.2	49.1	8.9	1,769.8	3,598.9	627.1	5,995.8
1998	21.8	2.7	38.7	6.5	1,105.5	2,189.8	360.2	3,655.5

1/ Lambs born equals lamb crop plus lambs lost before docking. 2/ Totals may not add because of rounding.

# SHEEP & LAMBS: Losses by Cause, Montana, 1997-1998

Cause of Loss	SHEEP LOSS				LAMB LOSS				TOTAL LOSS			
	Number of Head		Value in Dollars (000) 1/, 3/		Number of Head		Value in Dollars (000) 2/, 3/		Number of Head		Value in Dollars (000) 3/	
	1997	1998	1997	1998	1997	1998	1997	1998	1997	1998	1997	1998
<b>Predators</b>												
Fox	-	100	-	7.9	2,200	1,900	129.1	83.9	2,200	2,000	129.1	91.8
Dog	400	500	39.6	39.5	600	700	35.2	30.9	1,000	1,200	74.8	70.4
Coyote	3,500	2,900	346.5	229.1	16,400	12,000	962.4	529.9	19,900	14,900	1,308.9	759.0
Eagle	100	100	9.9	7.9	2,300	1,900	135.0	83.9	2,400	2,000	144.9	91.8
Bobcat	-	-	-	-	100	-	5.9	-	100	-	5.9	-
Bear	200	100	19.8	7.9	200	200	11.7	8.8	400	300	31.5	16.7
Mountain Lion	300	400	29.7	31.6	200	200	11.7	8.8	500	600	41.4	40.4
Other Animals	-	-	-	-	-	100	-	4.4	-	100	-	4.4
Unknown Predators	100	-	9.9	-	400	700	23.5	30.9	500	700	33.4	30.9
Total Predators	4,600	4,100	455.4	323.9	22,400	17,700	1,314.4	781.6	27,000	21,800	1,769.8	1,105.5
<b>Non-Predators</b>												
All Diseases	3,000	3,000	297.0	237.0	4,800	6,300	281.7	278.2	7,800	9,300	578.7	515.2
Weather Conditions	7,100	2,000	702.9	158.0	19,100	8,000	1,120.8	353.3	26,200	10,000	1,823.7	511.3
Poison	900	1,000	89.1	79.0	600	800	35.2	35.3	1,500	1,800	124.3	114.3
Lambing Complications	900	1,400	89.1	110.6	5,600	8,000	328.6	353.3	6,500	9,400	417.7	463.9
On Back	800	1,000	79.2	79.0	-	-	-	-	800	1,000	79.2	79.0
Old Age	4,100	4,900	405.9	387.1	-	-	-	-	4,100	4,900	405.9	387.1
Theft	800	300	79.2	23.7	500	400	29.3	17.7	1,300	700	108.5	41.4
Other	200	200	19.8	15.8	700	1,400	41.1	61.8	900	1,600	60.9	77.6
Total Non-Predators	17,800	13,800	1,762.2	1,090.2	31,300	24,900	1,836.7	1,099.6	49,100	38,700	3,598.9	2,189.8
Unknown Causes	2,600	2,100	257.4	165.9	6,300	4,400	369.7	194.3	8,900	6,500	627.1	360.2
Total Loss ,	25,000	20,000	2,475.0	1,580.0	60,000	47,000	3,520.8	2,075.5	85,000	67,000	5,995.8	3,655.5

1/ Using average reported value for Ewes 1+. 2/ Lamb values equal to market year average price received for lambs multiplied by an average weight of 60 pounds per lamb. 3/ Totals may not add due to rounding. - Denotes less than 100 head.



# SHEEP & LAMBS: Percent of Losses By Cause and Size of Flock, Montana, 1997-1998

CAUSE OF LOSS	SIZE OF FLOCK										
	1-99		100-999		1000+		All Sizes				
	1997	1998	1997	1998	1997	1998	1994	1995	1996	1997	1998
<b>Predators</b>											
Fox	—	2	2	2	4	4	6	4	3	3	3
Dog	1	3	2	2	—	1	1	2	2	1	2
Coyote	33	12	21	20	26	30	27	30	27	23	22
Eagle	—	—	2	1	5	6	5	3	3	3	3
Bobcat	—	—	—	—	—	—	—	—	—	—	—
Bear	—	—	—	—	1	1	1	—	1	—	—
Mountain Lion	—	4	—	—	1	1	1	1	1	1	1
Other Animals	—	1	—	—	—	—	—	—	—	—	—
Unknown Predators	—	1	1	2	1	1	2/	1	1	1	1
Total Predators 1/	35	24	29	28	38	43	41	40	38	32	33
<b>Non-Predators</b>											
All Diseases	7	25	12	12	8	11	15	10	8	9	14
Weather Conditions	39	15	35	21	27	11	11	16	17	31	15
Poison	3	—	1	2	2	5	2	2	2	2	3
Lambing Complications	5	25	9	15	5	10	10	9	8	8	14
On Back	—	—	1	1	1	2	2	1	1	1	1
Old Age	3	6	5	7	3	5	6	6	5	5	7
Theft	—	—	—	1	3	1	3	2	3	2	1
Other Causes	2	1	1	3	1	3	2	4	2	1	2
Total Non-Predators	60	72	65	61	50	48	52	50	47	58	57
Unknown Causes	5	4	7	11	13	9	7	10	15	10	10
Total Loss 1/	100	100	100	100	100	100	100	100	100	100	100

1/ Totals may not add due to rounding. 2/ Not available. — Denotes less than 1 percent.

Peggy Stringer  
State Statistician

Carmen Pennington  
Agricultural Statistician



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Released: February 25, 2000

# MONTANA SHEEP & LAMB LOSSES--1999

Montana sheep and lamb producers lost 64,000 animals to weather, predators, disease and other causes during 1999, representing a total value of more than \$3.7 million, according to a survey conducted by the Montana Agricultural Statistics Service. The total number of sheep and lambs lost dropped 4 percent from 1998 but the total value of inventory lost in 1999 increased 1 percent. Decreased losses are partially due to total sheep and lamb inventory dropping 8 percent from the previous year. Higher average market prices this past year resulted in the increased value of sheep and lambs losses. Sheep and lamb deaths amounted to 8.6 percent of the January 1 inventory and lambs born -- slightly more than the previous year.

Predators caused an estimated \$1.1 million in losses in 1999, down slightly from the previous year. Losses due to predators amounted to 2.7 percent of the January 1 inventory and lambs born and 32 percent of all sheep and lamb deaths. Coyotes remained the largest predator for both sheep and lambs. Coyotes accounted for 74 percent of the predator caused losses and 24 percent of all death losses in the state. The number of sheep and

lambs lost to coyotes was 15,100 head, up 200 head from 1998. The value of losses attributed to coyotes was \$0.8 million. The number of sheep and lambs lost to all predators totaled 20,300 head, down 1,500 head from last year. Lamb losses by all predators amounted to 16,500 head, down 7 percent from last year. The number of sheep lost to all predators totaled 3,800, down 300 head from a year ago.

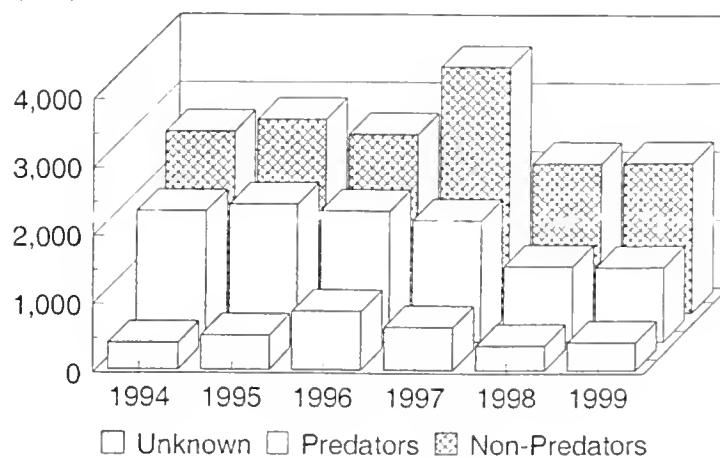
The total value of non-predatory losses was \$2.2 million in 1999, slightly less than the previous year. Non-predatory losses accounted for 58 percent of all losses. The largest non-predatory cause of losses were diseases at

12,400 head. Sheep lost to non-predatory factors totaled 12,000 head, 13 percent lower than 1998. Non-predatory lamb losses came in at 24,800 head, 100 head lower than a year ago.

More producers reported sheep and lambs lost to unknown causes. There was a 6 percent increase in the number of sheep and lambs lost to unknown causes from the previous year. Lambs lost to unknown causes totaled 4,700 head, 300 head higher than 1998. Unknown causes claimed 2,200 sheep, 100 more head than last year. The value of sheep and lambs lost to unknown causes rose to \$0.4 million.

## Sheep & Lamb Losses - 1999

Causes of Death  
(000) Dollars



## Methodology and Definitions

The sheep and lamb survey utilized multi-frame sampling procedures. The survey involved drawing a random sample from a list of livestock producers maintained by the Montana Agricultural Statistics Service. In addition, sheep producers living in a selected sample of area segments were interviewed. This procedure assures complete coverage of

sheep producers by accounting for ranchers/farmers who may not be on the list.

Sheep and lamb loss estimates published by the USDA include sheep losses for the entire year, but include only those lamb losses that occur after docking. This special report also includes an estimate of lambs lost before docking.

## Cooperation

This study was undertaken at the request of the Montana Wool Growers Association and the USDA, Animal Plant Health Inspection Service who also provided funding. The Montana Agricultural Statistics Service conducted the survey and expresses appreciation to all cooperating sheep producers.

### Sheep & Lambs: Inventory, Death Losses, and Value of Losses, Montana, 1990-1999

Year	Jan. 1 Sheep & Lamb Inventory (000 head)	Lamb Crop (000 head)	DEATH LOSSES					
			All Sheep Losses (000 head)	Lambs (000 head)			All Sheep & Lamb Losses	
				Before Docking	After Docking	All Lambs	Total Loss (000 head)	% Jan. 1 Inventory & Lambs Born 1/
1990	663	535	40	53	40	93	133.0	10.6
1991	683	585	42	54	46	100	142.0	10.7
1992	678	510	35	39	38	77	112.0	9.1
1993	564	480	35	36	37	73	108.0	10.0
1994	534	465	29	35	40	75	104.0	10.1
1995	490	410	25	34	33	67	92.0	9.9
1996	465	390	21	30	32	62	83.0	9.4
1997	432	380	25	32	28	60	85.0	10.1
1998	415	355	20	25	22	47	67.0	8.4
1999	380	340	18	23	23	46	64.0	8.6

Year	Predator Losses		Non-Predator Loss (000 head)	Unknown Causes (000 head)	Value of Losses (000 dollars)			
	Total Loss (000 head)	% Jan. 1 Inventory & Lambs Born 1/			Predator	Non-Predator	Unknown	Total 2/
1990	39.1	3.1	79.9	14.0	1,491.1	3,586.1	659.8	5,737.0
1991	44.9	3.4	83.5	13.6	1,590.0	3,179.6	550.4	5,320.0
1992	41.2	3.4	63.0	7.8	1,593.6	2,696.0	374.6	4,664.1
1993	40.2	3.7	59.4	8.4	1,767.7	2,891.8	418.8	5,078.2
1994	42.9	4.1	53.8	7.3	1,897.0	2,649.9	386.6	4,933.5
1995	37.1	4.0	46.9	8.0	2,001.0	2,821.2	500.1	5,322.3
1996	31.2	3.5	39.2	12.6	1,902.1	2,606.9	853.9	5,362.9
1997	27.0	3.2	49.1	8.9	1,769.8	3,598.9	627.1	5,995.8
1998	21.8	2.7	38.7	6.5	1,105.5	2,189.8	360.2	3,655.5
1999	20.3	2.7	36.8	6.9	1,094.7	2,198.8	410.2	3,703.7

1/ Lambs born equals lamb crop plus lambs lost before docking. 2/ Totals may not add because of rounding.

# SHEEP & LAMBS: Losses by Cause, Montana, 1998-1999

Cause of Loss	SHEEP LOSS				LAMB LOSS				TOTAL LOSS			
	Number of Head		Value in Dollars (000) 1/ , 3/		Number of Head		Value in Dollars (000) 2/ , 3/		Number of Head		Value in Dollars (000) 3/	
	1998	1999	1998	1999	1998	1999	1998	1999	1998	1999	1998	1999
<b>Predators</b>												
Fox	100	-	7.9	-	1,900	1,200	83.9	55.3	2,000	1,200	91.8	55.3
Dog	500	300	39.5	26.4	700	300	30.9	13.8	1,200	600	70.4	40.2
Coyote	2,900	2,800	229.1	246.4	12,000	12,300	529.9	566.8	14,900	15,100	759.0	813.2
Eagle	100	100	7.9	8.8	1,900	1,600	83.9	73.7	2,000	1,700	91.8	82.5
Bobcat	-	-	-	-	-	-	-	-	-	-	-	-
Bear	100	200	7.9	17.6	200	200	8.8	9.2	300	400	16.7	26.8
Mountain Lion	400	200	31.6	17.6	200	200	8.8	9.2	600	400	40.4	26.8
Other Animals	-	-	-	-	100	-	4.4	-	100	-	4.4	-
Unknown Predators	-	200	-	17.6	700	700	30.9	32.3	700	900	30.9	49.9
<b>Total Predators</b>	<b>4,100</b>	<b>3,800</b>	<b>323.9</b>	<b>334.4</b>	<b>17,700</b>	<b>16,500</b>	<b>781.6</b>	<b>760.3</b>	<b>21,800</b>	<b>20,300</b>	<b>1,105.5</b>	<b>1,094.7</b>
<b>Non-Predators</b>												
Digestive	4/	700	4/	61.6	4/	2,700	4/	124.4	4/	3,400	4/	186.0
Respiratory	4/	800	4/	70.4	4/	4,200	4/	193.5	4/	5,000	4/	263.9
Metabolic	4/	700	4/	61.6	4/	800	4/	36.9	4/	1,500	4/	98.5
Other Diseases	4/	900	4/	79.2	4/	1,600	4/	73.7	4/	2,500	4/	152.9
<b>Total All Diseases</b>	<b>3,000</b>	<b>3,100</b>	<b>237.0</b>	<b>272.8</b>	<b>6,300</b>	<b>9,300</b>	<b>278.2</b>	<b>428.5</b>	<b>9,300</b>	<b>12,400</b>	<b>515.2</b>	<b>701.3</b>
Weather Conditions	2,000	1,000	158.0	88.0	8,000	7,600	353.3	350.2	10,000	8,600	511.3	438.2
Poison	1,000	1,000	79.0	88.0	800	500	35.3	23.0	1,800	1,500	114.3	111.0
Lambing Complications	1,400	1,300	110.6	114.4	8,000	5,600	353.3	258.0	9,400	6,900	463.9	372.4
On Back	1,000	1,000	79.0	88.0	-	-	-	-	1,000	1,000	79.0	88.0
Old Age	4,900	3,900	387.1	343.2	-	-	-	-	4,900	3,900	387.1	343.2
Theft	300	600	23.7	52.8	400	600	17.7	27.6	700	1,200	41.4	80.4
Other	200	100	15.8	8.8	1,400	1,200	61.8	55.3	1,600	1,300	77.6	64.1
<b>Total Non-Predators</b>	<b>13,800</b>	<b>12,000</b>	<b>1,090.2</b>	<b>1,056.0</b>	<b>24,900</b>	<b>24,800</b>	<b>1,099.6</b>	<b>1,142.8</b>	<b>38,700</b>	<b>36,800</b>	<b>2,189.8</b>	<b>2,198.8</b>
<b>Unknown Causes</b>	<b>2,100</b>	<b>2,200</b>	<b>165.9</b>	<b>193.6</b>	<b>4,400</b>	<b>4,700</b>	<b>194.3</b>	<b>216.6</b>	<b>6,500</b>	<b>6,900</b>	<b>360.2</b>	<b>410.2</b>
<b>Total Loss</b>	<b>20,000</b>	<b>18,000</b>	<b>1,580.0</b>	<b>1,584.0</b>	<b>47,000</b>	<b>46,000</b>	<b>2,075.5</b>	<b>2,119.7</b>	<b>67,000</b>	<b>64,000</b>	<b>3,655.5</b>	<b>3,703.7</b>

1/ Using average reported value for Ewes 1+. 2/ Lamb values equal to market year average price received for lambs multiplied by an average weight of 60 pounds per lamb. 3/ Totals may not add due to rounding. 4/ Not available. - Denotes less than 100 head.



**SHEEP & LAMBS: Percent of Losses By Cause and Size of Flock, Montana, 1998-1999**

Cause of Loss	Size of Flock										
	1-99		100-999		1000+		All Sizes				
	1998	1999	1998	1999	1998	1999	1995	1996	1997	1998	1999
<b>Predators</b>											
Fox	2	-	2	2	4	3	4	3	3	3	2
Dog	3	1	2	1	1	1	2	2	1	2	1
Coyote	12	27	20	24	30	27	30	27	23	22	24
Eagle	-	-	1	3	6	3	3	3	3	3	3
Bobcat	-	-	-	-	1	1	-	1	-	-	1
Bear	-	-	-	-	-	-	-	-	-	-	-
Mountain Lion	4	-	-	-	1	1	1	1	1	1	1
Other Animals	1	-	-	-	-	-	-	-	-	-	-
Unknown Predators	1	-	2	1	1	2	1	1	1	1	1
Total Predators 1/	24	29	28	31	43	39	40	38	32	33	32
<b>Non-Predators</b>											
Digestive	2/	9	2/	6	2/	5	2/	2/	2/	2/	5
Respiratory	2/	8	2/	8	2/	5	2/	2/	2/	2/	8
Metabolic	2/	4	2/	1	2/	1	2/	2/	2/	2/	2
Other Diseases	2/	6	2/	5	2/	3	2/	2/	2/	2/	4
<b>Total All Diseases</b>	<b>25</b>	<b>28</b>	<b>12</b>	<b>20</b>	<b>11</b>	<b>15</b>	<b>10</b>	<b>8</b>	<b>9</b>	<b>14</b>	<b>20</b>
Weather Conditions	15	6	21	12	11	14	16	17	31	15	13
Poison	-	-	2	1	5	3	2	2	2	3	2
Lambing Complications	25	21	15	12	10	8	9	8	8	14	11
On Back	-	1	1	1	2	2	1	1	1	1	2
Old Age	6	7	7	6	5	4	6	5	5	7	6
Theft	-	-	1	3	1	2	2	3	2	1	2
Other Causes	1	1	3	3	3	2	4	2	1	2	2
<b>Total Non-Predators</b>	<b>72</b>	<b>63</b>	<b>61</b>	<b>58</b>	<b>48</b>	<b>50</b>	<b>50</b>	<b>47</b>	<b>58</b>	<b>57</b>	<b>57</b>
<b>Unknown Causes</b>	<b>4</b>	<b>8</b>	<b>11</b>	<b>11</b>	<b>9</b>	<b>11</b>	<b>10</b>	<b>15</b>	<b>10</b>	<b>10</b>	<b>11</b>
<b>Total Loss 1/</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

1/ Totals may not add due to rounding. 2/ Not available. - Denotes less than 1 percent.

Peggy Stringer  
State Statistician

Carmen Pennington  
Agricultural Statistician



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# MONTANA SHEEP & LAMB LOSSES-2000

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Released: February 23, 2001

Montana sheep and lamb producers lost 66,000 animals to weather, predators, disease and other causes during 2000, representing a total value of more than \$4.1 million, according to a survey conducted by the Montana Agricultural Statistics Service. The total number of sheep and lambs lost rose 3 percent from 1999 and the total value of inventory lost in 2000 increased 11 percent. Higher average market prices this past year resulted in the increased sheep and lamb values. The total January 1, 2000 sheep and lamb inventory is 3 percent lower than the previous year. Sheep and lamb deaths amounted to 8.7 percent of the January 1 inventory plus lambs born -- slightly higher than the previous year.

Predators caused an estimated \$1.1 million in losses in 2000, down 1 percent from the previous year. Losses due to predators amounted to 2.5 percent of the January 1 inventory plus lambs born and 29 percent of all sheep and lamb deaths. Coyotes remained the largest predator for both sheep and lambs. Coyotes accounted for 68 percent of the predator caused losses and 20 percent of all death losses in the state. The value of losses attributed to coyotes was \$0.7

million. The number of sheep and lambs lost to all predators totaled 18,900 head, down 1,400 head from last year. Lamb losses by all predators amounted to 15,900 head, down 4 percent from last year. The number of sheep lost to all predators totaled 3,000, down 800 head from a year ago.

The total value of non-predatory losses was \$2.4 million in 2000, 10 percent more than the previous year. Non-predatory losses accounted for 57 percent of all losses. The largest non-predatory cause of losses were diseases at 9,900 head. Sheep lost to non-predatory factors totaled 13,200 head, 10 percent higher than 1999.

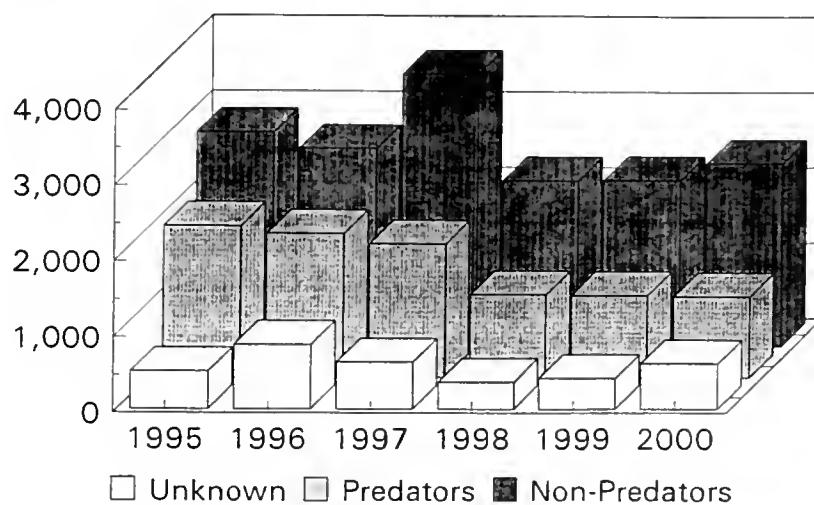
Non-predatory lamb losses came in at 24,100 head, 700 head lower than a year ago.

Producers reported more sheep and lambs lost to unknown causes this past year. This resulted in a 42 percent increase in the number of sheep and lambs lost to unknown causes from last year. Lambs lost to unknown causes totaled 7,000 head, compared with 4,700 head last year. Unknown causes claimed 2,800 sheep, 600 more head than last year. The value of sheep and lambs lost to unknown causes rose to \$0.6 million.

## Value of Sheep & Lamb Losses, 1995-2000

By Cause of Death

(000) Dollars



## Methodology and Definitions

The sheep and lamb survey utilized multi-frame sampling procedures. The survey involved drawing a random sample from a list of livestock producers maintained by the Montana Agricultural Statistics Service. In addition, sheep producers living in a selected sample of area segments were interviewed. This procedure

assures complete coverage of sheep producers by accounting for ranchers/farmers who may not be on the list.

Sheep and lamb loss estimates published by the USDA include sheep losses for the entire year, but include only those lamb losses that occur after docking. This special report also includes an estimate of lambs lost before docking.

## Cooperation

This study was undertaken at the request of the Montana Wool Growers Association who also provided funding. The Montana Agricultural Statistics Service conducted the survey and expresses appreciation to all cooperating sheep producers.

### Sheep & Lambs: Inventory, Death Losses, and Value of Losses, Montana, 1990-2000

Year	Jan. 1 Sheep & Lamb Inventory (000 head)	Lamb Crop (000 head)	DEATH LOSSES					
			All Sheep Losses (000 head)	Lambs (000 head)			All Sheep & Lamb Losses	
				Before Docking	After Docking	All Lambs	Total Loss (000 head)	% Jan. 1 Inventory & Lambs Born 1/
1990	663	535	40	53	40	93	133	10.6
1991	683	585	42	54	46	100	142	10.7
1992	678	510	35	39	38	77	112	9.1
1993	564	480	35	36	37	73	108	10.0
1994	534	465	29	35	40	75	104	10.1
1995	490	410	25	34	33	67	92	9.9
1996	465	390	21	30	32	62	83	9.4
1997	432	380	25	32	28	60	85	10.1
1998	415	355	20	25	22	47	67	8.4
1999	380	340	18	23	23	46	64	8.6
2000	370	365	19	23	24	47	66	8.7

Year	Predator Losses		Non-Predator Loss (000 head)	Unknown Causes (000 head)	Value of Losses (000 dollars)			
	Total Loss (000 head)	% Jan. 1 Inventory & Lambs Born 1/			Predator	Non-Predator	Unknown	Total 2/
1990	39.1	3.1	79.9	14.0	1,491.1	3,586.1	659.8	5,737.0
1991	44.9	3.4	83.5	13.6	1,590.0	3,179.6	550.4	5,320.0
1992	41.2	3.4	63.0	7.8	1,593.6	2,696.0	374.6	4,664.1
1993	40.2	3.7	59.4	8.4	1,767.7	2,891.8	418.8	5,078.2
1994	42.9	4.1	53.8	7.3	1,897.0	2,649.9	386.6	4,933.5
1995	37.1	4.0	46.9	8.0	2,001.0	2,821.2	500.1	5,322.3
1996	31.2	3.5	39.2	12.6	1,902.1	2,606.9	853.9	5,362.9
1997	27.0	3.2	49.1	8.9	1,769.8	3,598.9	627.1	5,995.8
1998	21.8	2.7	38.7	6.5	1,105.5	2,189.8	360.2	3,655.5
1999	20.3	2.7	36.8	6.9	1,094.7	2,198.8	410.2	3,703.7
2000	18.9	2.5	37.3	9.8	1,079.1	2,423.1	609.7	4,111.9

1/ Lambs born equals lamb crop plus lambs lost before docking. 2/ Totals may not add because of rounding.

# SHEEP & LAMBS: Losses by Cause, Montana, 1999-2000

Cause of Loss	SHEEP LOSS				LAMB LOSS				TOTAL LOSS			
	Number of Head		Value in Dollars (000) 1/, 3/		Number of Head		Value in Dollars (000) 2/, 3/		Number of Head		Value in Dollars (000) 3/	
	1999	2000	1999	2000	1999	2000	1999	2000	1999	2000	1999	2000
<b>Predators</b>												
Fox	-	-	-	-	1,200	1,000	55.3	50.7	1,200	1,000	55.3	50.7
Dog	300	600	26.4	54.6	300	700	13.8	35.5	600	1,300	40.2	90.1
Coyote	2,800	1,900	246.4	172.9	12,300	11,000	566.8	557.7	15,100	12,900	813.2	730.6
Eagle	100	-	8.8	-	1,600	1,600	73.7	81.1	1,700	1,600	82.5	81.1
Bobcat	-	-	-	-	-	-	-	-	-	-	-	-
Bear	200	400	17.6	36.4	200	500	9.2	25.4	400	900	26.8	61.8
Mountain Lion	200	100	17.6	9.1	200	300	9.2	15.2	400	400	26.8	24.3
Other Animals	-	-	-	-	100	-	5.1	-	100	-	-	5.1
Unknown Predators	200	-	17.6	-	700	700	32.3	35.5	900	700	49.9	35.5
<b>Total Predators</b>	<b>3,800</b>	<b>3,000</b>	<b>334.4</b>	<b>273.0</b>	<b>16,500</b>	<b>15,900</b>	<b>760.3</b>	<b>806.1</b>	<b>20,300</b>	<b>18,900</b>	<b>1,094.7</b>	<b>1,079.1</b>
<b>Non-Predators</b>												
All Diseases	3,100	2,200	272.8	200.2	9,300	7,700	428.5	390.4	12,400	9,900	701.3	590.6
Weather Conditions	1,000	400	88.0	36.4	7,600	6,600	350.2	334.6	8,600	7,000	438.2	371.0
Poison	1,000	1,200	88.0	109.2	500	700	23.0	35.5	1,500	1,900	111.0	144.7
Lambing Complications	1,300	1,800	114.4	163.8	5,600	5,900	258.0	299.1	6,900	7,700	372.4	462.9
On Back	1,000	1,300	88.0	118.3					1,000	1,300	88.0	118.3
Old Age	3,900	5,700	343.2	518.7					3,900	5,700	343.2	518.7
Theft	600	200	52.8	18.2	600	200	27.6	10.1	1,200	400	80.4	28.3
Other	100	400	8.8	36.4	1,200	3,000	55.3	152.1	1,300	3,400	64.1	188.5
<b>Total Non-Predators</b>	<b>12,000</b>	<b>13,200</b>	<b>1,056.0</b>	<b>1,201.2</b>	<b>24,800</b>	<b>24,100</b>	<b>1,142.8</b>	<b>1,221.9</b>	<b>36,800</b>	<b>37,300</b>	<b>2,198.8</b>	<b>2,423.1</b>
<b>Unknown Causes</b>	<b>2,200</b>	<b>2,800</b>	<b>193.6</b>	<b>254.8</b>	<b>4,700</b>	<b>7,000</b>	<b>216.6</b>	<b>354.9</b>	<b>6,900</b>	<b>9,800</b>	<b>410.2</b>	<b>609.7</b>
<b>Total Loss</b>	<b>18,000</b>	<b>19,000</b>	<b>1,584.0</b>	<b>1,729.0</b>	<b>46,000</b>	<b>47,000</b>	<b>2,119.7</b>	<b>2,382.9</b>	<b>64,000</b>	<b>66,000</b>	<b>3,703.7</b>	<b>4,111.9</b>

1/ Using average reported value for Ewes 1+. 2/ Lamb values equal to market year average price received for lambs multiplied by an average weight of 60 pounds per lamb. 3/ Totals may not add due to rounding. - Denotes less than 100 head.



**SHEEP & LAMBS: Percent of Losses By Cause and Size of Flock, Montana, 1999-2000**

**SIZE OF FLOCK**

CAUSE OF LOSS	1-99		100-999		1000+		All Sizes				
	1999	2000	1999	2000	1999	2000	1996	1997	1998	1999	2000
<b>Predators</b>											
	Percent										
Fox	-	-	2	2	3	3	3	3	3	2	2
Dog	1	3	1	1	1	1	2	1	2	1	2
Coyote	27	13	24	17	27	21	27	23	22	24	20
Eagle	-	-	3	2	3	5	3	3	3	3	2
Bobcat	-	-	-	-	1	-	1	-	-	1	-
Bear	-	-	-	1	-	2	-	-	-	-	1
Mountain Lion	-	3	-	1	1	-	1	1	1	1	1
Other Animals	-	2	-	-	-	-	-	-	-	-	-
Unknown Predators	-	-	1	-	2	2	1	1	1	1	1
<b>Total Predators 1/</b>	<b>29</b>	<b>21</b>	<b>31</b>	<b>24</b>	<b>39</b>	<b>34</b>	<b>38</b>	<b>32</b>	<b>33</b>	<b>32</b>	<b>28</b>
<b>Non-Predators</b>											
	Percent										
All Diseases	28	11	20	17	15	12	8	9	14	20	15
Weather Conditions	6	12	12	15	14	10	17	31	15	13	11
Poison	-	-	1	1	3	5	2	2	3	2	3
Lambing Complications	21	14	12	16	8	9	8	8	14	11	12
On Back	1	-	1	2	2	2	1	1	1	2	2
Old Age	7	6	6	9	4	4	5	5	7	6	9
Theft	-	-	3	-	2	1	3	2	1	2	1
Other Causes	1	19	3	4	2	5	2	1	2	2	5
<b>Total Non-Predators</b>	<b>63</b>	<b>63</b>	<b>58</b>	<b>64</b>	<b>50</b>	<b>48</b>	<b>47</b>	<b>58</b>	<b>57</b>	<b>57</b>	<b>57</b>
<b>Unknown Causes</b>	<b>8</b>	<b>16</b>	<b>11</b>	<b>13</b>	<b>11</b>	<b>19</b>	<b>15</b>	<b>10</b>	<b>10</b>	<b>11</b>	<b>15</b>
<b>Total Loss 1/</b>	<b>100</b>										

1/ Totals may not add due to rounding. - Denotes less than 1 percent.

Peggy Stringer  
State Statistician

Carmen Pennington  
Agricultural Statistician



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**MONTANA SHEEP & LAMB LOSSES-2001**  
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Released: February 22, 2002

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Montana sheep and lamb producers lost 66,000 animals to weather, predators, disease and other causes during 2001, representing a total value of more than \$3.2 million, according to a survey conducted by the Montana Agricultural Statistics Service. While the total number of sheep and lambs lost remained the same as last year, the total value of inventory lost was 22 percent lower than a year ago. Lower average market prices this past year resulted in a decrease of sheep and lamb values. Total inventory is 3 percent lower than the previous year. Sheep and lamb deaths amounted to 9.1 percent of the January 1 inventory and lambs born -- slightly more than the previous year.

The number of sheep and lambs lost to all predators totaled 19,900 head, up 1,000 head from last year. Lamb losses by all predators amounted to 16,800 head, up 6 percent from last year. The number of sheep lost to all predators totaled 3,100, up 100 head from a year ago. Predators caused an estimated \$0.9 million in losses in 2001, down from the previous year. Losses due to predators amounted to 2.7 percent of the January 1 inventory and lambs born and 30 percent of all sheep and lamb deaths. Coyotes

remained the largest predator for both sheep and lambs. Coyotes accounted for 72 percent of the predator caused losses and 22 percent of all death losses in the state. The value of losses attributed to coyotes was \$0.6 million.

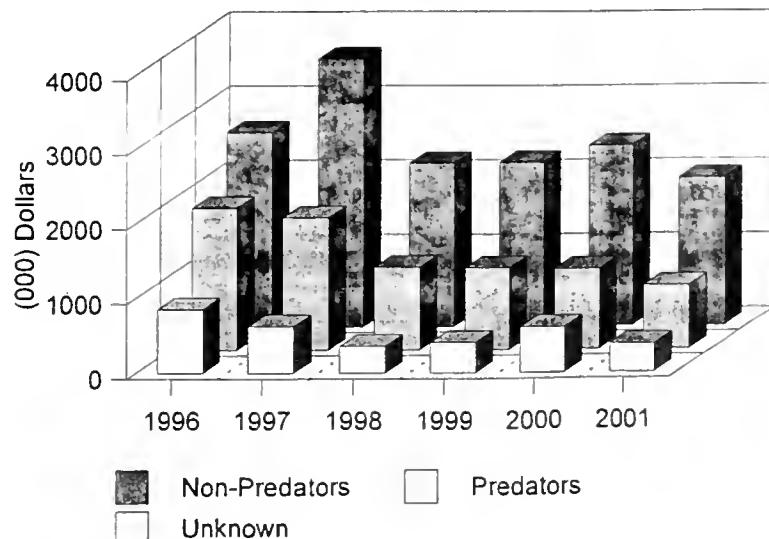
The total value of non-predatory losses was \$2.0 million in 2001, 18 percent less than the previous year. Non-predatory losses accounted for 58 percent of all losses. The largest non-predatory cause of losses was disease at 10,500 head. Sheep lost to non-predatory factors totaled 13,500 head, 2 percent higher than 2000.

Non-predatory lamb losses came in at 25,100 head, 1,000 head higher than a year ago.

Producers reported less sheep and lambs lost to unknown causes this past year. This resulted in a 23 percent decrease in the number of sheep and lambs lost to unknown causes from last year. Lambs lost to unknown causes totaled 5,100 head, compared with 7,000 head last year. Unknown causes claimed 2,400 sheep, 400 head less than last year. The value of sheep and lambs lost to unknown causes declined to \$0.4 million.

### Value of Sheep & Lamb Losses, 1996-2001

By Cause of Death



## Methodology and Definitions

The sheep and lamb survey utilized multi-frame sampling procedures. The survey involved drawing a random sample from a list of livestock producers maintained by the Montana Agricultural Statistics Service. In addition, sheep producers living in a selected sample of area segments were interviewed. This procedure

assures complete coverage of sheep producers by accounting for ranchers/farmers who may not be on the list.

Sheep and lamb loss estimates published by the USDA include sheep losses for the entire year, but include only those lamb losses that occur after docking. This special report also includes an estimate of lambs lost before docking.

## Cooperation

This study was undertaken at the request of the Montana Wool Growers Association who also provided funding. The Montana Agricultural Statistics Service conducted the survey and expresses appreciation to all cooperating sheep producers.

### Sheep & Lambs: Inventory, Death Losses, and Value of Losses, Montana, 1991-2001

Year	Jan. 1 Sheep & Lamb Inventory (000 head)	Lamb Crop (000 head)	DEATH LOSSES					
			All Sheep Losses (000 head)	Lambs (000 head)			All Sheep & Lamb Losses	
				Before Docking	After Docking	All Lambs	Total Loss (000 head)	% Jan. 1 Inventory & Lambs Born 1/
1991	683	585	42	54	46	100	142	10.7
1992	678	510	35	39	38	77	112	9.1
1993	564	480	35	36	37	73	108	10.0
1994	534	465	29	35	40	75	104	10.1
1995	490	410	25	34	33	67	92	9.9
1996	465	390	21	30	32	62	83	9.4
1997	432	380	25	32	28	60	85	10.1
1998	415	355	20	25	22	47	67	8.4
1999	380	340	18	23	23	46	64	8.6
2000	370	365	19	23	24	47	66	8.7
2001	360	340	19	24	23	47	66	9.1

Year	Predator Losses		Non-Predator Loss (000 head)	Unknown Causes (000 head)	Value of Losses (000 dollars)			
	Total Loss (000 head)	% Jan. 1 Inventory & Lambs Born 1/			Predator	Non-Predator	Unknown	Total 2/
1991	44.9	3.4	83.5	13.6	1,590.0	3,179.6	550.4	5,320.0
1992	41.2	3.4	63.0	7.8	1,593.6	2,696.0	374.6	4,664.1
1993	40.2	3.7	59.4	8.4	1,767.7	2,891.8	418.8	5,078.2
1994	42.9	4.1	53.8	7.3	1,897.0	2,649.9	386.6	4,933.5
1995	37.1	4.0	46.9	8.0	2,001.0	2,821.2	500.1	5,322.3
1996	31.2	3.5	39.2	12.6	1,902.1	2,606.9	853.9	5,362.9
1997	27.0	3.2	49.1	8.9	1,769.8	3,598.9	627.1	5,995.8
1998	21.8	2.7	38.7	6.5	1,105.5	2,189.8	360.2	3,655.5
1999	20.3	2.7	36.8	6.9	1,094.7	2,198.8	410.2	3,703.7
2000	18.9	2.5	37.3	9.8	1,079.1	2,423.1	609.7	4,111.9
2001	19.9	2.7	38.6	7.5	850.8	1,980.6	375.0	3,206.4

1/ Lambs born equals lamb crop plus lambs lost before docking. 2/ Totals may not add because of rounding.

# SHEEP & LAMBS: Losses by Cause, Montana, 2000-2001

Cause of Loss	SHEEP LOSS				LAMB LOSS				TOTAL LOSS			
	Number of Head		Value in Dollars (000) 1/, 3/		Number of Head		Value in Dollars (000) 2/, 3/		Number of Head		Value in Dollars (000) 3/	
	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001
<b>Predators</b>												
Fox	-	-	-	-	1,000	900	50.7	32.3	1,000	900	50.7	32.3
Dog	600	500	54.6	40.0	700	600	35.5	21.5	1,300	1,100	90.1	61.5
Coyote	1,900	2,100	172.9	168.0	11,000	12,200	557.7	437.7	12,900	14,300	730.6	605.7
Eagle	-	100	-	8.0	1,600	1,500	81.1	53.8	1,600	1,600	81.1	61.8
Bobcat	-	-	-	-	-	100	-	3.6	-	100	-	3.6
Bear	400	200	36.4	16.0	500	300	25.4	10.8	900	500	61.8	26.8
Mountain Lion	100	100	9.1	8.0	300	300	15.2	10.8	400	400	24.3	18.8
Other Animals	-	-	-	-	100	-	5.1	-	100	-	5.1	-
Unknown Predators	-	100	-	8.0	700	900	35.5	32.3	700	1,000	35.5	40.3
Total Predators	3,000	3,100	273.0	248.0	15,900	16,800	806.1	602.8	18,900	19,900	1,079.1	850.8
<b>Non-Predators</b>												
All Diseases	2,200	2,200	200.2	176.0	7,700	8,300	390.4	297.8	9,900	10,500	590.6	473.8
Weather Conditions	400	1,200	36.4	96.0	6,600	7,100	334.6	254.7	7,000	8,300	371.0	350.7
Poison	1,200	1,100	109.2	88.0	700	500	35.5	17.9	1,900	1,600	144.7	105.9
Lambing Complications	1,800	1,800	163.8	144.0	5,900	5,600	299.1	200.9	7,700	7,400	462.9	344.9
On Back	1,300	1,200	118.3	96.0	-	-	-	-	1,300	1,200	118.3	96.0
Old Age	5,700	5,000	518.7	400.0	-	-	-	-	5,700	5,000	518.7	400.0
Theft	200	300	18.2	24.0	200	500	10.1	17.9	400	800	28.3	41.9
Other	400	700	36.4	56.0	3,000	3,100	152.1	111.2	3,400	3,800	188.5	167.2
Total Non-Predators	13,200	13,500	1,201.2	1,080.0	24,100	25,100	1,221.9	900.6	37,300	38,600	2,423.1	1,980.6
Unknown Causes	2,800	2,400	254.8	192.0	7,000	5,100	354.9	183.0	9,800	7,500	609.7	375.0
Total Loss	19,000	19,000	1,729.0	1,520.0	47,000	47,000	2,382.9	1,686.4	66,000	66,000	4,111.9	3,206.4

1/ Using average reported value for Ewes 1+. 2/ Lamb values equal to market year average price received for lambs multiplied by an average weight of 60 pounds per lamb. 3/ Totals may not add due to rounding. - Denotes less than 100 head.



**SHEEP & LAMBS: Percent of Losses By Cause and Size of Flock, Montana, 2000-2001**

CAUSE OF LOSS	SIZE OF FLOCK										
	1-99		100-999		1000+		All Sizes				
	2000	2001	2000	2001	2000	2001	1997	1998	1999	2000	2001
<b>Predators</b>											Percent
Fox	-	-	2	1	3	2	3	3	2	2	1
Dog	3	2	1	3	1	-	1	2	1	2	2
Coyote	13	20	17	24	21	25	23	22	24	20	22
Eagle	-	-	2	2	5	5	3	3	3	2	2
Bobcat	-	-	-	-	-	-	-	-	1	-	-
Bear	-	-	1	-	2	1	-	-	-	1	1
Mountain Lion	3	-	1	1	-	-	1	1	1	1	1
Other Animals	2	-	-	-	-	-	-	-	-	-	-
Unknown Predators	-	2	-	1	2	2	1	1	1	1	2
Total Predators 1/	21	24	24	34	34	37	32	33	32	28	29
<b>Non-Predators</b>											Percent
All Diseases	11	14	17	16	12	14	9	14	20	15	16
Weather Conditions	12	23	15	12	10	12	31	15	13	11	13
Poison	-	-	1	-	5	4	2	3	2	3	2
Lambing Complications	14	17	16	11	9	9	8	14	11	12	11
On Back	-	1	2	1	2	1	1	1	2	2	1
Old Age	6	6	9	8	4	5	5	7	6	9	8
Theft	-	-	-	1	1	2	2	1	2	1	1
Other Causes	19	1	4	8	5	4	1	2	2	5	7
Total Non-Predators	63	63	64	56	48	52	58	57	57	57	58
Unknown Causes	16	13	13	10	19	12	10	10	11	15	12
Total Loss 1/	100	100	100	100	100	100	100	100	100	100	100

1/ Totals may not add due to rounding. - Denotes less than 1 percent.

Peggy Stringer  
State Statistician

Carmen Pennington  
Agricultural Statistician



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# MONTANA SHEEP & LAMB LOSSES-2002

STATE DOCUMENTS COLLECTION

1-26-2003



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Released: February 21, 2003

Montana sheep and lamb producers lost 67,000 animals to weather, predators, disease and other causes during 2002, representing a total value of more than \$4.1 million, according to a survey conducted by the Montana Agricultural Statistics Service. While the total number of sheep and lambs lost increased only 1,000 head from last year, the total value of inventory lost was 29 percent higher than a year ago. Higher average market prices this past year resulted in an increase to sheep and lamb values. Total inventory is 7 percent lower than the previous year. Sheep and lamb deaths amounted to 9.9 percent of the January 1 inventory and lambs born -- slightly more than the previous year.

The number of sheep and lambs lost to all predators totaled 21,400 head, up 1,500 head from last year. Lamb losses by all predators amounted to 16,500 head, down 2 percent from last year. The number of sheep lost to all predators totaled 4,900, up 1,800 head from a year ago. Predators caused an estimated \$1.3 million in losses in 2002, up 50 percent from the previous year. Losses due to predators amounted to 3.2 percent of the January 1 inventory and lambs born and 32 percent of all sheep and lamb deaths.

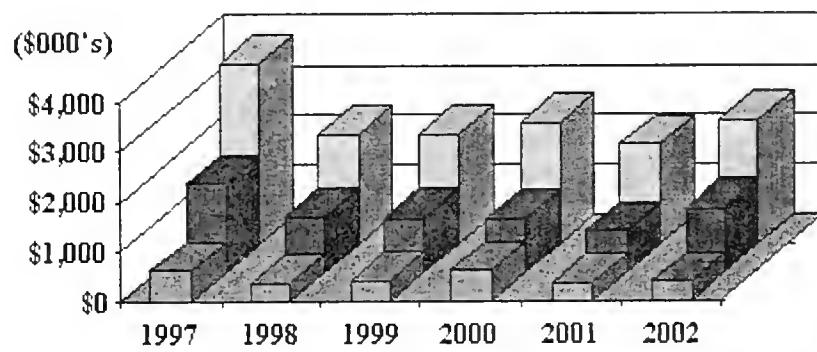
Coyotes remained the largest predator for both sheep and lambs. Coyotes accounted for 65 percent of the predator caused losses and 21 percent of all death losses in the state. The value of losses attributed to coyotes was \$809,200.

The total value of non-predatory losses was \$2.5 million in 2002, 24 percent above the previous year. Non-predatory losses accounted for 60 percent of all losses. The largest non-predatory cause of losses was weather conditions at 13,400 head. Sheep lost to non-predatory factors totaled 10,900 head, 19 percent higher than 2001.

Non-predatory lamb losses came in at 29,000 head, 3,900 head higher than a year ago.

Producers reported less sheep and lambs lost to unknown causes this past year. This resulted in a 24 percent decrease in the number of sheep and lambs lost to unknown causes from last year. Lambs lost to unknown causes totaled 3,500 head, compared with 5,100 head last year. Unknown causes claimed 2,200 sheep, 200 head less than last year. The value of sheep and lambs lost to unknown causes was \$384,200.

## Value of Sheep & Lamb Losses, 1997-2002



Unknown    Predator    Non-predator

## Methodology and Definitions

The sheep and lamb survey utilized multi-frame sampling procedures. The survey involved drawing a random sample from a list of livestock producers maintained by the Montana Agricultural Statistics Service. In addition, sheep producers living in a selected sample of area segments were interviewed. This procedure

assures complete coverage of sheep producers by accounting for ranchers/farmers who may not be on the list.

Sheep and lamb loss estimates published by the USDA include sheep losses for the entire year, but include only those lamb losses that occur after docking. This special report also includes an estimate of lambs lost before docking.

## Cooperation

This study was undertaken at the request of the Montana Wool Growers Association who also provided funding. The Montana Agricultural Statistics Service conducted the survey and expresses appreciation to all cooperating sheep producers.

### Sheep & Lambs: Inventory, Death Losses, and Value of Losses, Montana, 1992-2002

Year	Jan. 1 Sheep & Lamb Inventory (000 head)	Lamb Crop (000 head)	DEATH LOSSES					
			All Sheep Losses (000 head)	Lambs (000 head)			All Sheep & Lamb Losses	
				Before Docking	After Docking	All Lambs	Total Loss (000 head)	% Jan. 1 Inventory & Lambs Born 1/
1992	678	510	35	39	38	77	112	9.1
1993	564	480	35	36	37	73	108	10.0
1994	534	465	29	35	40	75	104	10.1
1995	490	410	25	34	33	67	92	9.9
1996	465	390	21	30	32	62	83	9.4
1997	432	380	25	32	28	60	85	10.1
1998	415	355	20	25	22	47	67	8.4
1999	380	340	18	23	23	46	64	8.6
2000	370	365	19	23	24	47	66	8.7
2001	360	340	19	24	23	47	66	9.1
2002	335	315	18	25	24	49	67	9.9

Year	Predator Losses		Non-Predator Loss (000 head)	Unknown Causes (000 head)	Value of Losses (000 dollars)			
	Total Loss (000 head)	% Jan. 1 Inventory & Lambs Born 1/			Predator	Non-Predator	Unknown	Total 2/
1992	41.2	3.4	63.0	7.8	1,593.6	2,696.0	374.6	4,664.1
1993	40.2	3.7	59.4	8.4	1,767.7	2,891.8	418.8	5,078.2
1994	42.9	4.1	53.8	7.3	1,897.0	2,649.9	386.6	4,933.5
1995	37.1	4.0	46.9	8.0	2,001.0	2,821.2	500.1	5,322.3
1996	31.2	3.5	39.2	12.6	1,902.1	2,606.9	853.9	5,362.9
1997	27.0	3.2	49.1	8.9	1,769.8	3,598.9	627.1	5,995.8
1998	21.8	2.7	38.7	6.5	1,105.5	2,189.8	360.2	3,655.5
1999	20.3	2.7	36.8	6.9	1,094.7	2,198.8	410.2	3,703.7
2000	18.9	2.5	37.3	9.8	1,079.1	2,423.1	609.7	4,111.9
2001	19.9	2.7	38.6	7.5	850.8	1,980.6	375.0	3,206.4
2002	21.4	3.2	39.9	5.7	1,275.5	2,465.4	384.2	4,124.8

1/ Lambs born equals lamb crop plus lambs lost before docking. 2/ Totals may not add because of rounding.

## SHEEP & LAMBS: Losses by Cause, Montana, 2001-2002

Cause of Loss	SHEEP LOSS				LAMB LOSS				TOTAL LOSS			
	Number of Head		Value in Dollars (000) 1/, 3/		Number of Head		Value in Dollars (000) 2/, 3/		Number of Head		Value in Dollars (000) 3/	
	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
<b>Predators</b>												
Fox	-	100	-	9.8	900	1,200	32.3	57.8	900	1,300	32.3	67.6
Dog	500	500	40.0	49.0	600	500	21.5	24.1	1,100	1,000	61.5	73.1
Coyote	2,100	2,800	168.0	274.4	12,200	11,100	437.7	534.8	14,300	13,900	605.7	809.2
Eagle	100	100	8.0	9.8	1,500	1,500	53.8	72.3	1,600	1,600	61.8	82.1
Bobcat	-	100	-	9.8	100	200	3.6	9.6	100	300	3.6	19.4
Bear	200	300	16.0	29.4	300	300	10.8	14.5	500	600	26.8	43.9
Mountain Lion	100	200	8.0	19.6	300	500	10.8	24.1	400	700	18.8	43.7
Wolf	-	300	-	29.4	-	200	-	9.6	-	500	-	39.0
Other Animals	-	200	-	19.6	-	200	-	9.6	-	400	-	29.2
Unknown Predators	100	300	8.0	29.4	900	800	32.3	38.5	1,000	1,100	40.3	67.9
<b>Total Predators</b>	<b>3,100</b>	<b>4,900</b>	<b>248.0</b>	<b>480.2</b>	<b>16,800</b>	<b>16,500</b>	<b>602.8</b>	<b>795.0</b>	<b>19,900</b>	<b>21,400</b>	<b>850.8</b>	<b>1,275.2</b>
<b>Non-Predators</b>												
All Diseases	2,200	1,500	176.0	147.0	8,300	6,600	297.8	318.0	10,500	8,100	473.8	465.0
Weather Conditions	1,200	1,900	96.0	186.2	7,100	11,500	254.7	554.1	8,300	13,400	350.7	740.3
Poison	1,100	800	88.0	78.4	500	700	17.9	33.7	1,600	1,500	105.9	112.1
Lambing Complications	1,800	1,700	144.0	166.6	5,600	6,200	200.9	298.7	7,400	7,900	344.9	465.3
On Back	1,200	700	96.0	68.6	-	100	-	4.8	1,200	800	96.0	73.4
Old Age	5,000	2,500	400.0	245.0	-	-	-	-	5,000	2,500	400.0	245.0
Theft	300	300	24.0	29.4	500	600	17.9	28.9	800	900	41.9	58.3
Other	700	1,500	56.0	147.0	3,100	3,300	111.2	159.0	3,800	4,800	167.2	306.0
<b>Total Non-Predators</b>	<b>13,500</b>	<b>10,900</b>	<b>1,080.0</b>	<b>1,068.2</b>	<b>25,100</b>	<b>29,000</b>	<b>900.6</b>	<b>1,397.2</b>	<b>38,600</b>	<b>39,900</b>	<b>1,980.6</b>	<b>2,465.4</b>
<b>Unknown Causes</b>	<b>2,400</b>	<b>2,200</b>	<b>192.0</b>	<b>215.6</b>	<b>5,100</b>	<b>3,500</b>	<b>183.0</b>	<b>168.6</b>	<b>7,500</b>	<b>5,700</b>	<b>375.0</b>	<b>384.2</b>
<b>Total Loss</b>	<b>19,000</b>	<b>18,000</b>	<b>1,520.0</b>	<b>1,764.0</b>	<b>47,000</b>	<b>49,000</b>	<b>1,686.4</b>	<b>2,360.8</b>	<b>66,000</b>	<b>67,000</b>	<b>3,206.4</b>	<b>4,124.8</b>

1/ Using average reported value for Ewes 1+. 2/ Lamb values equal to market year average price received for lambs multiplied by an average weight of 60 pounds per lamb. 3/ Totals may not add due to rounding. - Denotes less than 100 head.



## SHEEP & LAMBS: Percent of Losses By Cause and Size of Flock, Montana, 2001-2002

Cause of Loss	Size of Flock										
	1-99		100-999		1000+		All Sizes				
	2001	2002	2001	2002	2001	2002	1998	1999	2000	2001	2002
<b>Predators</b>											
Fox	-	1	1	1	2	3	3	2	2	1	2
Dog	2	1	3	3	-	-	2	1	2	2	1
Coyote	20	6	24	24	25	24	22	24	20	22	21
Eagle	-	-	2	2	5	4	3	3	2	2	2
Bobcat	-	-	-	-	-	1	-	1	-	-	-
Bear	-	1	-	1	1	1	-	-	1	1	1
Mountain Lion	-	2	1	1	-	1	1	1	1	1	1
Wolf	-	-	-	-	-	1	-	-	-	-	1
Other Animals	-	-	-	1	-	-	-	-	-	-	-
Unknown Predators	2	4	1	1	2	1	1	1	1	2	2
Total Predators 1/	24	16	34	34	37	37	33	32	28	29	32
<b>Non-Predators</b>											
All Diseases	14	15	16	10	14	8	14	20	15	16	12
Weather Conditions	23	16	12	22	12	20	15	13	11	13	20
Poison	-	2	-	1	4	3	3	2	3	2	2
Lambing Complications	17	17	11	12	9	12	14	11	12	11	12
On Back	1	-	1	1	1	1	1	2	2	1	1
Old Age	6	4	8	4	5	2	7	6	9	8	4
Theft	-	-	1	1	2	2	1	2	1	1	1
Other Causes	1	17	8	6	4	6	2	2	5	7	7
Total Non-Predators	63	71	56	58	52	54	57	57	57	58	60
Unknown Causes	13	13	10	9	12	8	10	11	15	12	9
Total Loss 1/	100	100	100	100	100	100	100	100	100	100	100

1/ Totals may not add due to rounding. - Denotes less than 1 percent.



# MONTANA SHEEP & LAMB LOSSES-2003

MONTANA STATE LIBRARY



Released: February 20, 2004

Montana sheep and lamb producers lost 58,000 animals to weather, predators, disease and other causes during 2003, representing a total value of more than \$4.5 million, according to a survey conducted by the Montana Agricultural Statistics Service. While the total number of sheep and lambs lost decreased 9,000 head from last year, the total value of inventory lost was 14 percent higher than a year ago. Higher average market prices this past year resulted in an increase to sheep and lamb values. Total inventory is 7 percent lower than the previous year. Sheep and lamb deaths amounted to 9.5 percent of the January 1 inventory and lambs born -- slightly less than the previous year.

The number of sheep and lambs lost to all predators totaled 17,700 head, down 3,700 head from last year. Lamb losses by all predators amounted to 13,800 head, down 16 percent from last year. The number of sheep lost to all predators totaled 3,900, down 1,000 head from a year ago. Predators caused an estimated \$1.3 million in losses in 2003, up 6 percent from the previous year. Losses due to predators amounted to 2.9 percent of the January 1 inventory and lambs born and 31 percent of all sheep and lamb

deaths. Coyotes remained the largest predator for both sheep and lambs. Coyotes accounted for 67 percent of the predator caused losses and 20 percent of all death losses in the state. The value of losses attributed to coyotes was \$0.8 million.

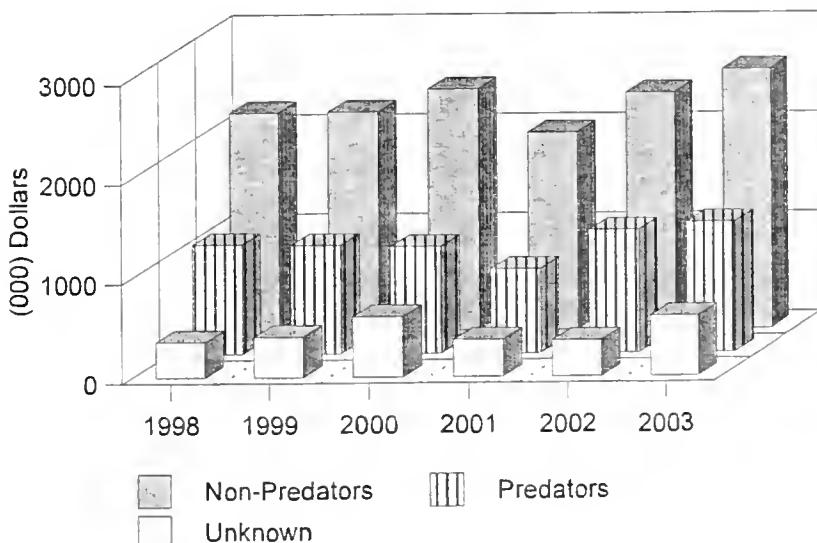
The total value of non-predatory losses was \$2.6 million in 2003, 10 percent more than the previous year. Non-predatory losses accounted for 57 percent of all losses. The largest non-predatory cause of losses were lambing complications at 8,600 head.

Sheep lost to non-predatory factors totaled 10,300 head, 6 percent lower than 2002. Non-predatory lamb losses came in at 22,700 head, 6,300 head lower than a year ago.

Producers reported a 28 percent increase in the number of sheep and lambs lost to unknown causes this past year. Lambs lost to unknown causes totaled 4,500 head, compared with 3,500 head last year. Unknown causes claimed 2,800 sheep, 600 head more than last year. The value of sheep and lambs lost to unknown causes increased to \$0.6 million.

## Value of Sheep & Lamb Losses, 1998-2003

By Cause of Death



## Methodology and Definitions

The sheep and lamb survey utilized multi-frame sampling procedures. The survey involved drawing a random sample from a list of livestock producers maintained by the Montana Agricultural Statistics Service. In addition, sheep producers living in a selected sample of area segments were interviewed. This procedure

assures complete coverage of sheep producers by accounting for ranchers/farmers who may not be on the list.

Sheep and lamb loss estimates published by the USDA include sheep losses for the entire year, but include only those lamb losses that occur after docking. This special report also includes an estimate of lambs lost before docking.

## Cooperation

This study was undertaken at the request of the Montana Wool Growers Association who also provided funding. The Montana Agricultural Statistics Service conducted the survey and expresses appreciation to all cooperating sheep producers.

### Sheep & Lambs: Inventory, Death Loss, and Percent of Total Inventory Lost, Montana, 1994-2003

Year	January 1 Inventory	Lamb Crop	All Sheep Losses	Lamb Losses			Total Loss	Percent of Total Inventory Lost 1/
				Before Docking	After Docking	All Lambs		
	(000) head		(000) head			(000) head	Percent	
1994	534	465	29	35	40	75	104	10.1
1995	490	410	25	34	33	67	92	9.9
1996	465	390	21	30	32	62	83	9.4
1997	432	380	25	32	28	60	85	10.1
1998	415	355	20	25	22	47	67	8.4
1999	380	340	18	23	23	46	64	8.6
2000	370	365	19	23	24	47	66	8.7
2001	360	340	19	24	23	47	66	9.1
2002	335	295	18	25	24	49	67	10.2
2003	310	280	17	21	20	41	58	9.5

1/ Total inventory equals January 1 inventory plus lamb crop plus lambs lost before docking.

### Sheep & Lambs: Death Losses by Cause and Value of Losses, Montana, 1994-2003

Year	Predator Losses		Non-Predator Loss	Unknown Causes	Value of Losses			
	Total	Percent of Total Inventory Lost 1/			Predator	Non-Predator	Unknown	Total 2/
	(000) Head	Percent	(000) Head	(000) Dollars				
1994	42.9	4.1	53.8	7.3	1,897.0	2,649.9	386.6	4,933.5
1995	37.1	4.0	46.9	8.0	2,001.0	2,821.2	500.1	5,322.3
1996	31.2	3.5	39.2	12.6	1,902.1	2,606.9	853.9	5,362.9
1997	27.0	3.2	49.1	8.9	1,769.8	3,598.9	627.1	5,995.8
1998	21.8	2.7	38.7	6.5	1,105.5	2,189.8	360.2	3,655.5
1999	20.3	2.7	36.8	6.9	1,094.7	2,198.8	410.2	3,703.7
2000	18.9	2.5	37.3	9.8	1,079.1	2,423.1	609.7	4,111.9
2001	19.9	2.7	38.6	7.5	850.8	1,980.6	375.0	3,206.4
2002	21.4	3.3	39.9	5.7	1,236.0	2,378.2	366.6	3,980.8
2003	17.7	2.9	33.0	7.3	1,309.1	2,608.0	605.7	4,522.8

1/ Lambs born equals lamb crop plus lambs lost before docking. 2/ Totals may not add because of rounding.

## SHEEP & LAMBS: Death Losses by Cause, Montana, 2002-2003

Cause of Loss	SHEEP LOSS				LAMB LOSS				TOTAL LOSS			
	Number of Head		Value in Dollars (000) 1/, 3/, 4/		Number of Head		Value in Dollars (000) 2/, 3/		Number of Head		Value in Dollars (000) 3/, 4/	
	2002	2003	2002	2003	2002	2003	2002	2003	2002	2003	2002	2003
<b>Predators</b>												
Fox	100	--	9.0	--	1,200	1,000	57.8	61.8	1,300	1,000	66.8	61.8
Dog	500	600	45.0	70.2	500	400	24.1	24.7	1,000	1,000	69.1	94.9
Coyote	2,800	2,100	252.0	245.7	11,100	9,700	534.8	599.5	13,900	11,800	786.8	845.2
Eagle	100	100	9.0	11.7	1,500	1,100	72.3	68.0	1,600	1,200	81.3	79.7
Bobcat	100	--	9.0	--	200	--	9.6	--	300	--	18.6	--
Bear	300	300	27.0	35.1	300	500	14.5	30.9	600	800	41.5	66.0
Mountain Lion	200	100	18.0	11.7	500	300	24.1	18.5	700	400	42.1	30.2
Wolf	300	300	27.0	35.1	200	200	9.6	12.4	500	500	36.6	47.5
Other Animals	200	--	18.0	--	200	100	9.6	6.2	400	100	27.6	6.2
Unknown Predators	300	400	27.0	46.8	800	500	38.5	30.9	1,100	900	65.5	77.7
Total Predators	4,900	3,900	441.0	456.3	16,500	13,800	795.0	852.8	21,400	17,700	1,236.0	1,309.1
<b>Non-Predators</b>												
All Diseases	1,500	2,100	135.0	245.7	6,600	6,100	318.0	377.0	8,100	8,200	453.0	622.7
Weather Conditions	1,900	600	171.0	70.2	11,500	5,700	554.1	352.3	13,400	6,300	725.1	422.5
Poison	800	600	72.0	70.2	700	500	33.7	30.9	1,500	1,100	105.7	101.1
Lambing Complications	1,700	1,400	153.0	163.8	6,200	7,200	298.7	445.0	7,900	8,600	451.7	608.8
On Back	700	800	63.0	93.6	100	100	4.8	6.2	800	900	67.8	99.8
Old Age	2,500	3,700	225.0	432.9					2,500	3,700	225.0	432.9
Theft	300	700	27.0	81.9	600	800	28.9	49.4	900	1,500	55.9	131.3
Other	1,500	400	135.0	46.8	3,300	2,300	159.0	142.1	4,800	2,700	294.0	188.9
Total Non-Predators	10,900	10,300	981.0	1,205.1	29,000	22,700	1,397.2	1,402.9	39,900	33,000	2,378.2	2,608.0
Unknown Causes	2,200	2,800	198.0	327.6	3,500	4,500	168.6	278.1	5,700	7,300	366.6	605.7
Total Loss	18,000	17,000	1,620.0	1,989.0	49,000	41,000	2,360.8	2,533.8	67,000	58,000	3,980.8	4,522.8

1/ Using average reported value for Ewes 1+. 2/ Lamb values equal to market year average price received for lambs multiplied by an average weight of 60 pounds per lamb. 3/ Totals may not add due to rounding. 4/ 2002 revised values for ewes 1+. - Denotes less than 100 head.



**SHEEP & LAMBS: Percent of Death Losses By Cause and Size of Flock, Montana, 2002-2003**

CAUSE OF LOSS	SIZE OF FLOCK										
	1-99		100-999		1000+		All Sizes				
	2002	2003	2002	2003	2002	2003	1999	2000	2001	2002	2003
<b>Predators</b>											Percent
Fox	1	--	1	2	3	2	2	2	1	2	2
Dog	1	1	3	2	--	--	1	2	2	1	2
Coyote	6	17	24	19	24	24	24	20	22	21	20
Eagle	-	1	2	2	4	3	3	2	2	2	2
Bobcat	-	--	-	--	1	--	1	-	-	-	--
Bear	1	--	1	2	1	2	-	1	1	1	1
Mountain Lion	2	--	1	1	1	--	1	1	1	1	1
Wolf	-	--	-	--	1	1	-	-	-	1	1
Other Animals	-	--	1	--	-	--	-	-	-	-	--
Unknown Predators	4	3	1	1	1	2	1	1	2	2	2
Total Predators 1/	16	23	34	30	37	34	32	28	29	32	30
<b>Non-Predators</b>											Percent
All Diseases	15	12	10	17	8	12	20	15	16	12	14
Weather Conditions	16	15	22	13	20	10	13	11	13	20	11
Poison	2	--	1	1	3	3	2	3	2	2	2
Lambing Complications	17	26	12	14	12	16	11	12	11	12	15
On Back	-	1	1	1	1	1	2	2	1	1	2
Old Age	4	4	4	6	2	4	6	9	8	4	6
Theft	-	--	1	2	2	3	2	1	1	1	3
Other Causes	17	3	6	4	6	3	2	5	7	7	5
Total Non-Predators	71	62	58	59	54	53	57	57	58	60	57
Unknown Causes	13	15	9	12	8	13	11	15	12	9	13
Total Loss 1/	100	100	100	100	100	100	100	100	100	100	100

1/ Totals may not add due to rounding. - Denotes less than 1 percent.



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# MONTANA SHEEP & LAMB LOSSES-2004

Released: February 18, 2005

Montana sheep and lamb producers lost 44,000 animals to weather, predators, disease and other causes during 2004, representing a total value of \$3.8 million, according to a survey conducted by the Montana Agricultural Statistics Service. The total number of sheep and lambs lost decreased 14,000 head from last year and the total value of inventory lost was almost 17 percent lower than a year ago. The January 1, 2004 inventory is 3 percent lower than the previous year. Sheep and lamb deaths amounted to 7.5 percent of the January 1 inventory and lambs born, down 2 percentage points from last year.

The number of sheep and lambs lost to all predators totaled 13,700 head, down 4,000 head from last year. Lamb losses by all predators amounted to 10,800 head, down 22 percent from last year. The number of sheep lost to all predators totaled 2,900, down 1,000 head from a year ago. Predators caused an estimated \$1.1 million in losses in 2004, down from the previous year. Losses due to predators amounted to 2.3 percent of the January 1 inventory and lambs born and 31 percent of all sheep and lamb deaths. Coyotes remained the largest predator for both sheep and

lambs. Coyotes accounted for 67 percent of the predator caused losses and 21 percent of all death losses in the state. The value of losses attributed to coyotes was \$0.7 million.

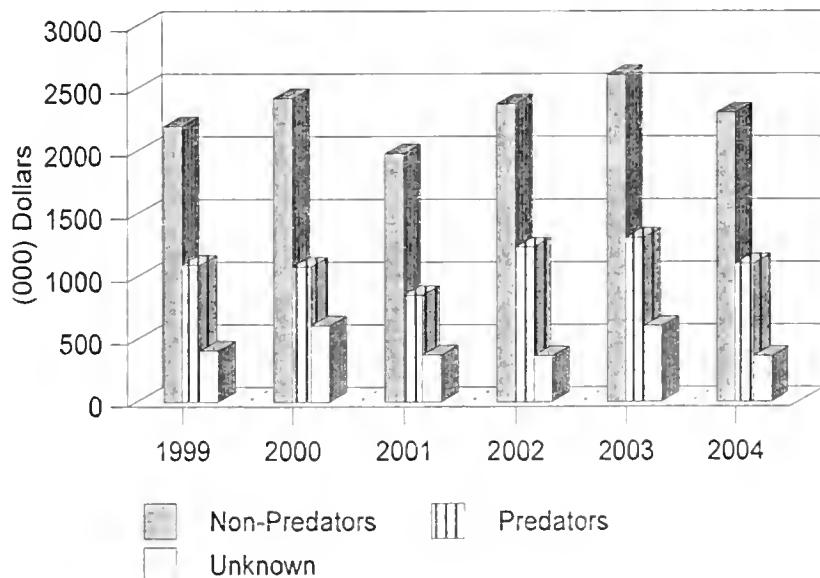
The total value of non-predatory losses was \$2.3 million in 2004, compared with \$2.6 million in 2003. Non-predatory losses accounted for 59 percent of all losses. The largest non-predatory cause of losses were diseases at 9,800 head. Sheep lost to non-predatory factors totaled 8,900 head, 14 percent lower than 2003.

Non-predatory lamb losses came in at 17,100 head, 5,600 head lower than a year ago.

Producers reported less sheep and lambs lost to unknown causes this past year. This resulted in a 41 percent decrease in the number of sheep and lambs lost to unknown causes from last year. Lambs lost to unknown causes totaled 3,100 head, compared with 4,500 head last year. Unknown causes claimed 1,200 sheep, 1,600 head less than last year. The value of sheep and lambs lost to unknown causes decreased to \$0.4 million.

## Value of Sheep & Lamb Losses, 1999-2004

By Cause of Death



## Methodology and Definitions

The sheep and lamb survey utilized multi-frame sampling procedures. The survey involved drawing a random sample from a list of livestock producers maintained by the Montana Agricultural Statistics Service. In addition, sheep producers living in a selected sample of area segments were interviewed. This procedure

assures complete coverage of sheep producers by accounting for ranchers/farmers who may not be on the list.

Sheep and lamb loss estimates published by the USDA include sheep losses for the entire year, but include only those lamb losses that occur after docking. This special report also includes an estimate of lambs lost before docking.

## Cooperation

This study was undertaken at the request of the Montana Wool Growers Association who also provided funding. The Montana Agricultural Statistics Service conducted the survey and expresses appreciation to all cooperating sheep producers.

### Sheep & Lambs: Inventory, Death Loss, and Percent of Total Inventory Lost, Montana, 1995-2004

Year	January 1 Inventory	Lamb Crop	All Sheep Losses	Lamb Losses			Total Loss	Percent of Total Inventory Lost 1/
				Before Docking	After Docking	All Lambs		
	(000) head	(000) head			(000) head	Percent		
1995	490	410	25	34	33	67	92	9.9
1996	465	390	21	30	32	62	83	9.4
1997	432	380	25	32	28	60	85	10.1
1998	415	355	20	25	22	47	67	8.4
1999	380	340	18	23	23	46	64	8.6
2000	370	365	19	23	24	47	66	8.7
2001	360	340	19	24	23	47	66	9.1
2002	335	295	18	25	24	49	67	10.2
2003	310	280	17	21	20	41	58	9.5
2004	300	270	13	17	14	31	44	7.5

1/ Total inventory equals January 1 inventory plus lamb crop plus lambs lost before docking.

### Sheep & Lambs: Death Losses by Cause and Value of Losses, Montana, 1995-2004

Year	Predator Losses		Non-Predator Loss	Unknown Causes	Value of Losses			
	Total	Percent of Total Inventory Lost 1/			Predator	Non-Predator	Unknown	Total 2/
	(000) Head	Percent	(000) Head	(000) Dollars				
1995	37.1	4.0	46.9	8.0	2,001.0	2,821.2	500.1	5,322.3
1996	31.2	3.5	39.2	12.6	1,902.1	2,606.9	853.9	5,362.9
1997	27.0	3.2	49.1	8.9	1,769.8	3,598.9	627.1	5,995.8
1998	21.8	2.7	38.7	6.5	1,105.5	2,189.8	360.2	3,655.5
1999	20.3	2.7	36.8	6.9	1,094.7	2,198.8	410.2	3,703.7
2000	18.9	2.5	37.3	9.8	1,079.1	2,423.1	609.7	4,111.9
2001	19.9	2.7	38.6	7.5	850.8	1,980.6	375.0	3,206.4
2002	21.4	3.3	39.9	5.7	1,236.0	2,378.2	366.6	3,980.8
2003	17.7	2.9	33.0	7.3	1,309.2	2,608.0	605.7	4,522.9
2004	13.7	2.3	26.0	4.3	1,102.6	2,306.2	364.3	3,773.1

1/ Lambs born equals lamb crop plus lambs lost before docking. 2/ Totals may not add because of rounding.

## SHEEP & LAMBS: Death Losses by Cause, Montana, 2003-2004

Cause of Loss	SHEEP LOSS				LAMB LOSS				TOTAL LOSS			
	Number of Head		Value in Dollars (000) 1/, 3/		Number of Head		Value in Dollars (000) 2/, 3/		Number of Head		Value in Dollars (000) 3/	
	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004
<b>Predators</b>												
Fox	--	--	--	--	1,000	700	61.8	47.0	1,000	700	61.8	47.0
Dog	600	400	70.2	52.0	400	300	24.7	20.2	1,000	700	94.9	72.2
Coyote	2,100	1,500	245.7	195.0	9,700	7,700	599.5	517.4	11,800	9,200	845.2	712.4
Eagle	100	--	11.7	--	1,100	700	68.0	47.0	1,200	700	79.7	47.0
Bobcat	--	--	--	--	--	--	--	--	--	--	--	--
Bear	300	500	35.1	65.0	500	400	30.9	26.9	800	900	66.0	91.9
Mountain Lion	100	--	11.7	--	300	500	18.5	33.6	400	500	30.2	33.6
Wolf	300	300	35.1	39.0	200	200	12.4	13.4	500	500	47.5	52.4
Other Animals	--	--	--	--	100	100	6.2	6.7	100	100	6.2	6.7
Unknown Predators	400	200	46.8	26.0	500	200	30.9	13.4	900	400	77.7	39.4
<b>Total Predators</b>	<b>3,900</b>	<b>2,900</b>	<b>456.3</b>	<b>377.0</b>	<b>13,800</b>	<b>10,800</b>	<b>852.9</b>	<b>725.6</b>	<b>17,700</b>	<b>13,700</b>	<b>1,309.2</b>	<b>1,102.6</b>
<b>Non-Predators</b>												
Digestive	4/	500	4/	65.0	4/	2,400	4/	161.3	4/	2,900	4/	226.3
Respiratory	4/	800	4/	104.0	4/	3,800	4/	255.4	4/	4,600	4/	359.4
Metabolic	4/	300	4/	39.0	4/	600	4/	40.3	4/	900	4/	79.3
Other Diseases	4/	900	4/	117.0	4/	500	4/	33.6	4/	1,400	4/	150.6
<b>Total All Diseases</b>	<b>2,100</b>	<b>2,500</b>	<b>245.7</b>	<b>325.0</b>	<b>6,100</b>	<b>7,300</b>	<b>377.0</b>	<b>490.6</b>	<b>8,200</b>	<b>9,800</b>	<b>622.7</b>	<b>815.6</b>
Weather Conditions	600	500	70.2	65.0	5,700	4,900	352.3	329.3	6,300	5,400	422.5	394.3
Poison	600	500	70.2	65.0	500	400	30.9	26.9	1,100	900	101.1	91.9
Lambing Complications	1,400	1,300	163.8	169.0	7,200	3,500	445.0	235.2	8,600	4,800	608.8	404.2
On Back	800	400	93.6	52.0	100	100	6.2	6.7	900	500	99.8	58.7
Old Age	3,700	3,400	432.9	442.0					3,700	3,400	432.9	442.0
Theft	700	--	81.9	--	800	--	49.4	--	1,500	--	131.3	--
Other	400	300	46.8	39.0	2,300	900	142.1	60.5	2,700	1,200	188.9	99.5
<b>Total Non-Predators</b>	<b>10,300</b>	<b>8,900</b>	<b>1,205.1</b>	<b>1,157.0</b>	<b>22,700</b>	<b>17,100</b>	<b>1,402.9</b>	<b>1,149.2</b>	<b>33,000</b>	<b>26,000</b>	<b>2,608.0</b>	<b>2,306.2</b>
<b>Unknown Causes</b>	<b>2,800</b>	<b>1,200</b>	<b>327.6</b>	<b>156.0</b>	<b>4,500</b>	<b>3,100</b>	<b>278.1</b>	<b>208.3</b>	<b>7,300</b>	<b>4,300</b>	<b>605.7</b>	<b>364.3</b>
<b>Total Loss</b>	<b>17,000</b>	<b>13,000</b>	<b>1,989.0</b>	<b>1,690.0</b>	<b>41,000</b>	<b>31,000</b>	<b>2,533.9</b>	<b>2,083.1</b>	<b>58,000</b>	<b>44,000</b>	<b>4,522.9</b>	<b>3,773.1</b>

1/ Using average reported value for Ewes 1+. 2/ Lamb values equal to market year average price received for lambs multiplied by an average weight of 60 pounds per lamb. 3/ Totals may not add due to rounding. 4/ Not available. -- Denotes less than 100 head.



**SHEEP & LAMBS: Percent of Death Losses By Cause and Size of Flock, Montana, 2003-2004**

CAUSE OF LOSS	SIZE OF FLOCK										
	1-99		100-999		1000+		All Sizes				
	2003	2004	2003	2004	2003	2004	2000	2001	2002	2003	2004
<b>Predators</b>											
Fox	--	--	2	1	2	3	2	1	2	2	2
Dog	1	5	2	1	--	1	2	2	1	2	2
Coyote	17	18	19	21	24	24	20	22	21	20	21
Eagle	1	1	2	2	3	2	2	2	2	2	2
Bobcat	--	--	--	--	--	--	--	--	--	--	--
Bear	--	3	2	2	2	2	1	1	1	1	2
Mountain Lion	--	1	1	2	--	1	1	1	1	1	1
Wolf	--	1	--	1	1	1	--	--	1	1	1
Other Animals	--	--	--	--	--	--	--	--	--	--	--
Unknown Predators	3	--	1	1	2	1	1	2	2	2	1
Total Predators 1/	23	29	30	30	34	35	28	30	31	30	31
<b>Non-Predators</b>											
Digestive	2/	4	2/	8	2/	7	2/	2/	2/	2/	7
Respiratory	2/	12	2/	9	2/	11	2/	2/	2/	2/	10
Metabolic	2/	2	2/	2	2/	2	2/	2/	2/	2/	2
Other Diseases	2/	--	2/	3	2/	3	2/	2/	2/	2/	3
<b>Total All Diseases</b>	<b>12</b>	<b>18</b>	<b>17</b>	<b>23</b>	<b>12</b>	<b>22</b>	<b>15</b>	<b>16</b>	<b>12</b>	<b>14</b>	<b>22</b>
Weather Conditions	15	16	13	14	10	11	11	13	20	11	12
Poison	--	--	1	1	3	4	3	2	2	2	2
Lambing Complications	26	18	14	10	16	11	12	11	12	15	11
On Back	1	1	1	1	1	1	2	1	1	2	1
Old Age	4	6	6	9	4	4	9	8	4	6	8
Theft	--	--	2	--	3	--	1	1	1	3	--
Other Causes	3	8	4	3	3	1	5	7	7	5	3
<b>Total Non-Predators</b>	<b>62</b>	<b>66</b>	<b>58</b>	<b>60</b>	<b>53</b>	<b>55</b>	<b>57</b>	<b>58</b>	<b>60</b>	<b>57</b>	<b>59</b>
<b>Unknown Causes</b>	<b>15</b>	<b>5</b>	<b>12</b>	<b>10</b>	<b>13</b>	<b>10</b>	<b>15</b>	<b>12</b>	<b>9</b>	<b>13</b>	<b>10</b>
<b>Total Loss 1/</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

1/ Totals may not add due to rounding. 2/ Not available. -- Denotes less than 1 percent.

Peggy Stringer

Director

Carmen Pennington

Agricultural Statistician



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# a Sheep and Lamb Loss 2005

## cause of Death and Value of Loss

Released: February 17, 2006



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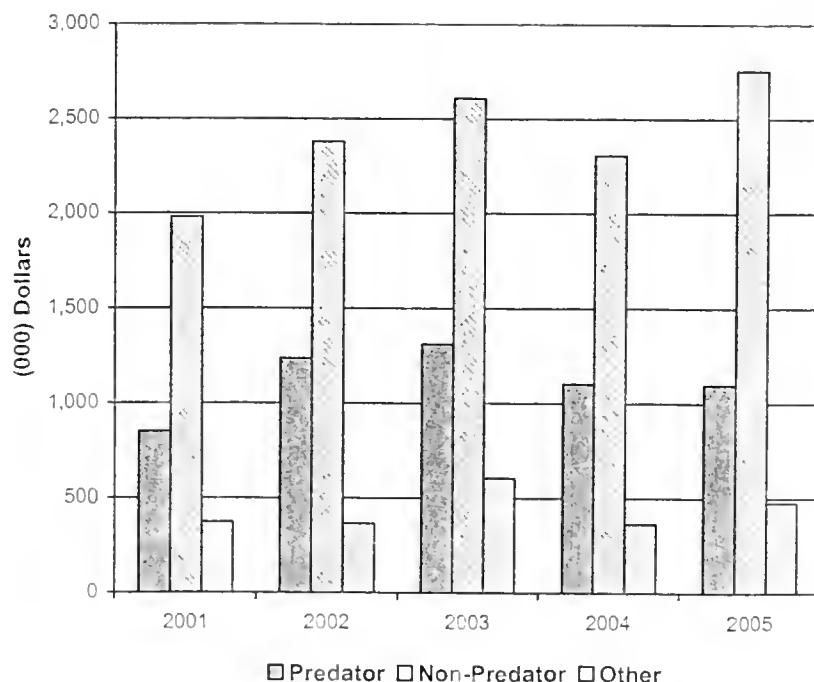
Montana sheep and lamb producers lost 46,000 animals to weather, predators, disease and other causes during 2005, representing a total value of \$4.3 million, according to a survey conducted by USDA, National Agricultural Statistics Service, Montana Field Office. The total number of sheep and lambs lost increased 2,000 head from last year and the total value of inventory lost was 15 percent greater than a year ago. The January 1, 2005 inventory was 2 percent greater than the previous year. Sheep and lamb deaths amounted to 7.6 percent of the January 1 inventory and lambs born, up 0.1 percentage points from last year.

The number of sheep and lambs lost to all predators totaled 12,400 head, down 1,300 head from last year. Lamb losses by all predators amounted to 10,100 head, down 6 percent from last year. The number of sheep lost to all predators totaled 2,300, down 600 head from a year ago. Predators caused an estimated \$1.1 million in losses in 2005, down slightly from the previous year. Losses due to predators amounted to 2.1 percent of the January 1 inventory and lambs born and 27 percent of all sheep and lamb deaths. Coyotes remained the largest predator for both sheep and lambs. Coyotes accounted for 69 percent of the predator caused losses and 18 percent of all death losses in the state. The value of losses attributed to coyotes was \$0.7 million.

The total value of non-predatory losses was \$2.8 million in 2005, compared with \$2.3 million in 2004. Non-predatory losses accounted for 62 percent of all losses. The largest non-predatory cause of losses was diseases at 7,400 head. Sheep lost to non-predatory factors totaled 8,500 head, 4 percent lower than 2004. Non-predatory lamb losses came in at 19,900 head, 2,800 head higher than a year ago.

Producers reported more sheep and lambs lost to unknown causes this past year. This resulted in a 21 percent increase in the number of sheep and lambs lost to unknown causes from last year. Lambs lost to unknown causes totaled 4,000 head, compared with 3,100 head last year. Unknown causes claimed 1,200 sheep, unchanged from last year. The value of sheep and lambs lost to unknown causes increased to \$0.5 million.

Value of Sheep & Lamb Losses, 2001-2005  
By Cause of Death





3 0864 1003 6502 5

## Methodology and Definitions

The sheep and lamb survey utilized multi-frame sampling procedures. The survey involved drawing a random sample from a list of livestock producers maintained by the USDA, National Agricultural Statistics Service, Montana Field Office. In addition, sheep producers living in a selected sample of area segments were interviewed. This procedure assures complete coverage of sheep producers by accounting for ranchers/farmers who may not be on the list.

Sheep and lamb loss estimates published by the USDA include sheep losses for the entire year, but include only those lamb losses that occur after docking. This special report also includes an estimate of lambs lost before docking.

## Cooperation

This study was undertaken at the request of the Montana Wool Growers Association who also provided funding. The USDA, National Agricultural Statistics Service, Montana Field Office conducted the survey and expresses appreciation to all cooperating sheep producers.

**Table 1: Sheep & Lambs: Inventory, Death Loss, and Percent of Total Inventory Lost, Montana, 1996-2005.**

Year	January 1 inventory	Lamb Crop	All Sheep Loses	Lamb Losses			Total Loss	Percent of Total Inventory Lost 1/
				Before Docking	After Docking	All Lambs		
	(000) Head						Percent	
1996	465	390	21	30	32	62	83	9.4
1997	432	380	25	32	28	60	85	10.1
1998	415	355	20	25	22	47	67	8.4
1999	380	340	18	23	23	46	64	8.6
2000	370	365	19	23	24	47	66	8.7
2001	360	340	19	24	23	47	66	9.1
2002	335	295	18	25	24	49	67	10.2
2003	310	280	17	21	20	41	58	9.5
2004	300	270	13	17	14	31	44	7.5
2005	305	280	12	19	15	34	46	7.6

1/ Total inventory equals January 1 inventory plus lamb crop plus lambs lost before docking

**Table 2: Sheep & Lambs: Death Losses by Cause and Value of Loss, Montana, 1996-2005.**

Year	Predator Losses		Non-Predator Loss	Unknown Causes	Value of Losses			
	Total	Percent of Total Inventory Lost 1/			Predator	Non Predator	Unknown	Total 2/
	(000) Head	Percent	(000) Head			(000) Dollars		
1996	31.2	3.5	39.2	12.6	1,902.1	2,606.9	853.9	5,362.9
1997	27.0	3.2	49.1	8.9	1,769.8	3,598.9	627.1	5,995.8
1998	21.8	2.7	38.7	6.5	1,105.5	2,189.8	360.2	3,655.5
1999	20.3	2.7	36.8	6.9	1,094.7	2,198.8	410.2	3,703.7
2000	18.9	2.5	37.3	9.8	1,079.1	2,423.1	609.7	4,111.9
2001	19.9	2.7	38.6	7.5	850.8	1,980.6	375.0	3,206.4
2002	21.4	3.3	39.9	5.7	1,236.0	2,378.2	366.6	3,980.8
2003	17.7	2.9	33.0	7.3	1,309.2	2,608.0	605.7	4,522.9
2004	13.7	2.3	26.0	4.3	1,102.6	2,306.2	364.3	3,773.1
2005	12.4	2.1	28.4	5.2	1,096.4	2,755.6	477.6	4,329.6

1/ Total inventory equals Jan 1 inventory, plus lamb crop plus lambs before docking.

2/ Totals may not add because of rounding.

**Table 3: Sheep & Lambs: Death Losses by Cause, Montana 2004-2005.**

Cause of Loss	SHEEP LOSS				LAMB LOSS				TOTAL LOSS			
	Number of Head		Value in Dollars (000) 1/, 3/		Number of Head		Value in Dollars (000) 2/, 3/		Number of Head		Value in Dollars (000) 3/	
	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005
<b>Predators</b>												
Bear	500	200	65.0	30.0	400	200	26.9	14.9	900	400	91.9	44.9
Bobcat	--	--	--	--	--	--	--	--	--	--	--	--
Coyote	1,500	1,500	195.0	225.0	7,700	7,000	517.4	520.8	9,200	8,500	712.4	745.8
Dog	400	200	52.0	30.0	300	300	20.2	22.3	700	500	72.2	52.3
Eagle	--	--	--	--	700	900	47.0	67.0	700	900	47.0	67.0
Fox	--	100	--	15.0	700	1,000	47.0	74.4	700	1,100	47.0	89.4
Mountain Lion	--	--	--	--	500	200	33.6	14.9	500	200	33.6	14.9
Wolf	300	200	39.0	30.0	200	100	13.4	7.4	500	300	52.4	37.4
Other Animals	--	--	--	--	100	100	6.7	7.4	100	100	6.7	7.4
Unknown Predators	200	100	26.0	15.0	200	300	13.4	22.3	400	400	39.4	37.3
<b>Total Predators</b>	<b>2,900</b>	<b>2,300</b>	<b>377.0</b>	<b>345.0</b>	<b>10,800</b>	<b>10,100</b>	<b>725.6</b>	<b>751.4</b>	<b>13,700</b>	<b>12,400</b>	<b>1,102.6</b>	<b>1,096.4</b>
<b>Non-Predators</b>												
Digestive	500	4/	65.0	4/	2,400	4/	161.3	4/	2,900	4/	226.3	4/
Respiratory	800	4/	104.0	4/	3,800	4/	255.4	4/	4,600	4/	359.4	4/
Metabolic	300	4/	39.0	4/	600	4/	40.3	4/	900	4/	79.3	4/
Other Diseases	900	4/	117.0	4/	500	4/	33.6	4/	1,400	4/	150.6	4/
<b>Total All Diseases</b>	<b>2,500</b>	<b>1,800</b>	<b>325.0</b>	<b>270.0</b>	<b>7,300</b>	<b>5,600</b>	<b>490.6</b>	<b>416.6</b>	<b>9,800</b>	<b>7,400</b>	<b>815.6</b>	<b>686.6</b>
Lambing Complications	1,300	1,200	169.0	180.0	3,500	4,600	235.2	342.2	4,800	5,800	404.2	522.2
Old Age	3,400	3,300	442.0	495.0	--	--	--	--	3,400	3,300	442.0	495.0
On Back	400	600	52.0	90.0	100	100	6.7	7.4	500	700	58.7	97.4
Poison	500	700	65.0	105.0	400	800	26.9	59.5	900	1,500	91.9	164.5
Theft	--	200	--	30.0	--	200	--	14.9	--	400	--	44.9
Weather Conditions	500	300	65.0	45.0	4,900	6,800	329.3	505.9	5,400	7,100	394.3	550.9
Other	300	400	39.0	60.0	900	1,800	60.5	133.9	1,200	2,200	99.5	193.9
<b>Total Non-Predators</b>	<b>8,900</b>	<b>8,500</b>	<b>1,157.0</b>	<b>1,275.0</b>	<b>17,100</b>	<b>19,900</b>	<b>1,149.2</b>	<b>1,480.6</b>	<b>26,000</b>	<b>28,400</b>	<b>2,306.2</b>	<b>2,755.6</b>
<b>Unknown Causes</b>	<b>1,200</b>	<b>1,200</b>	<b>156.0</b>	<b>180.0</b>	<b>3,100</b>	<b>4,000</b>	<b>208.3</b>	<b>297.6</b>	<b>4,300</b>	<b>5,200</b>	<b>364.3</b>	<b>477.6</b>
<b>Total Loss</b>	<b>13,000</b>	<b>12,000</b>	<b>1,690.0</b>	<b>1,800.0</b>	<b>31,000</b>	<b>34,000</b>	<b>2,083.1</b>	<b>2,529.6</b>	<b>44,000</b>	<b>46,000</b>	<b>3,773.1</b>	<b>4,329.6</b>

1/ Using average reported value for Ewes 1+.

2/ Lamb values equal to market year average price received for lambs multiplied by an average weight of 60 pounds per lamb.

3/ Totals may not add due to rounding.

4/ Not available.

-- Denotes less than 100 head.

### Sheep and Lamb Loss by Predator 2005

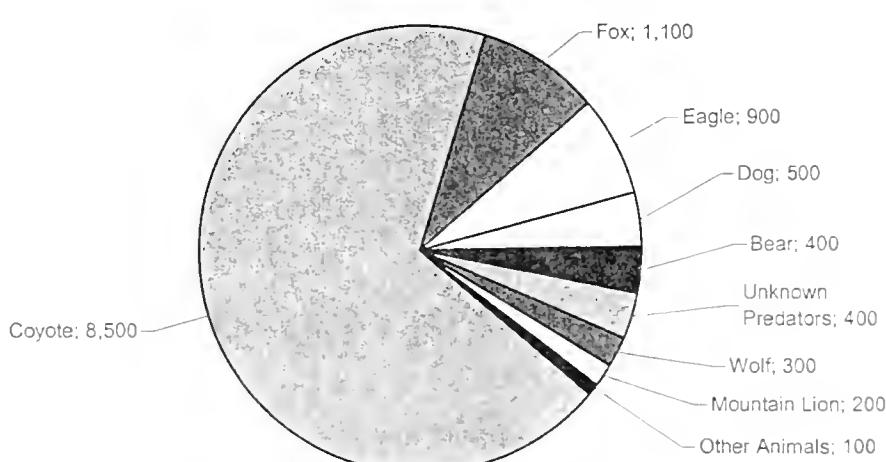


Table 4: Sheep & Lambs: Percent of Death Losses by Cause, Montana, 1996-2005.

Cause of Loss	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>Predators</b>										
Bear	1	--	--	--	1	1	1	1	2	1
Bobcat	--	--	--	--	--	--	--	--	--	--
Coyote	27	23	22	24	20	22	21	20	21	19
Dog	2	1	2	1	2	2	1	2	2	1
Eagle	3	3	3	3	2	2	2	2	2	2
Fox	3	3	3	2	2	1	2	2	2	2
Mountain Lion	1	1	1	1	1	1	1	1	1	--
Wolf	--	--	--	--	--	--	1	1	1	1
Other Animals	--	--	--	--	--	--	--	--	--	--
Unknown Predators	1	1	1	1	1	2	2	2	1	1
<b>Total Predators 1/</b>	<b>38</b>	<b>32</b>	<b>32</b>	<b>33</b>	<b>28</b>	<b>30</b>	<b>31</b>	<b>30</b>	<b>31</b>	<b>27</b>
<b>Non-Predators</b>										
Digestive	2/	2/	2/	5	2/	2/	2/	2/	7	2/
Respiratory	2/	2/	2/	8	2/	2/	2/	2/	10	2/
Metabolic	2/	2/	2/	2	2/	2/	2/	2/	2	2/
Other Diseases	2/	2/	2/	4	2/	2/	2/	2/	3	2/
<b>Total All Diseases</b>	<b>8</b>	<b>9</b>	<b>14</b>	<b>19</b>	<b>15</b>	<b>16</b>	<b>12</b>	<b>14</b>	<b>22</b>	<b>17</b>
Lambing Complications	8	8	14	11	12	11	12	15	11	13
Old Age	5	5	7	6	9	8	4	6	8	7
On Back	1	1	1	2	2	1	1	2	1	2
Poison	2	2	3	2	3	2	2	2	2	3
Theft	3	2	1	2	1	1	1	3	--	1
Weather Conditions	17	31	15	13	11	13	20	11	12	15
Other	2	1	2	2	5	7	7	5	3	5
<b>Total Non-Predators</b>	<b>47</b>	<b>58</b>	<b>57</b>	<b>57</b>	<b>57</b>	<b>58</b>	<b>60</b>	<b>57</b>	<b>59</b>	<b>62</b>
<b>Unknown Causes</b>	<b>15</b>	<b>10</b>	<b>10</b>	<b>11</b>	<b>15</b>	<b>12</b>	<b>9</b>	<b>13</b>	<b>10</b>	<b>11</b>
<b>Total Loss 1/</b>	<b>100</b>									

1/ Totals may not add due to rounding.

2/ Not available.

-- Denotes less than 1 percent.

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## Montana Sheep and Lamb Loss 2006

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### Montana Sheep and Lamb Loss 2006

#### Total Loss, Cause of Death and Value of Loss

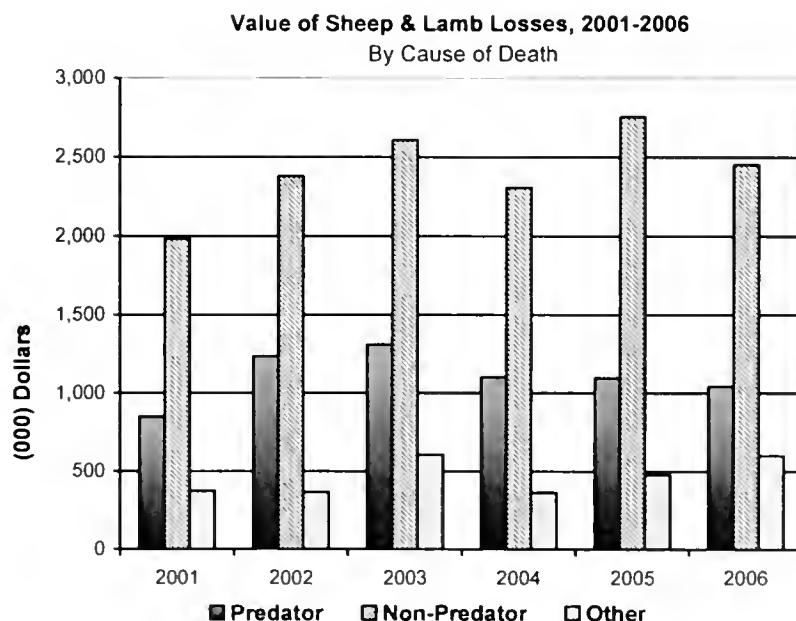
Released: February 16, 2007

Montana sheep and lamb producers lost 51,000 animals to weather, predators, disease and other causes during 2006, representing a total value of \$4.1 million, according to a survey conducted by USDA, National Agricultural Statistics Service, Montana Field Office. The total number of sheep and lambs lost increased 5,000 head from last year, but the total value of inventory lost was 5 percent less than a year ago. The January 1, 2006 inventory was 3 percent less than the previous year. Sheep and lamb deaths amounted to 8.7 percent of the January 1 inventory and lambs born, up one percentage point from last year.

The number of sheep and lambs lost to all predators totaled 14,100 head, up 1,700 head from last year. Lamb losses by all predators amounted to 11,500 head, up 14 percent from last year. The number of sheep lost to all predators totaled 2,600, up 300 head from a year ago. Predators caused an estimated \$1.0 million in losses in 2006, down slightly from the previous year. Losses due to predators amounted to 2.4 percent of the January 1 inventory and lambs born and 28 percent of all sheep and lamb deaths. Coyotes remained the largest predator for both sheep and lambs. Coyotes accounted for 72 percent of the predator caused losses and 20 percent of all death losses in the state. The value of losses attributed to coyotes was \$0.7 million.

The total value of non-predatory losses was \$2.5 million in 2006, compared with \$2.8 million in 2005. Non-predatory losses accounted for 58 percent of all losses. The largest non-predatory cause of losses was weather conditions at 9,200 head. Sheep lost to non-predatory factors totaled 9,200 head, 8 percent higher than 2005. Non-predatory lamb losses came in at 20,400 head, 500 head higher than a year ago.

Producers reported more sheep and lambs lost to unknown causes this past year. This resulted in a 40 percent increase in the number of sheep and lambs lost to unknown causes from last year. Lambs lost to unknown causes totaled 5,100 head, compared with 4,000 head last year. Unknown causes claimed 2,200 sheep, compared with 1,200 head last year. The value of sheep and lambs lost to unknown causes increased to \$0.6 million.





3 0864 1003 9590 7

## Methodology and Definitions

The sheep and lamb survey utilized multi-frame sampling procedures. The survey involved drawing a random sample from a list of livestock producers maintained by the USDA, National Agricultural Statistics Service, Montana Field Office. In addition, sheep producers living in a selected sample of area segments were interviewed. This procedure assures complete coverage of sheep producers by accounting for ranchers/farmers who may not be on the list.

Sheep and lamb loss estimates published by the USDA include sheep losses for the entire year, but include only those lamb losses that occur after docking. This special report also includes an estimate of lambs lost before docking.

## Cooperation

This study was undertaken at the request of the Montana Wool Growers Association who also provided funding. The USDA, National Agricultural Statistics Service, Montana Field Office conducted the survey and expresses appreciation to all cooperating sheep producers.

**Table 1: Sheep & Lambs: Inventory, Death Loss, and Percent of Total Inventory Lost, Montana, 1997-2006.**

Year	January 1 Inventory	Lamb Crop	All Sheep Losses	Lamb Losses			Total Loss	Percent of Total Inventory Lost 1/
				Before Docking	After Docking	All Lambs		
	(000) Head							Percent
1997	432	380	25	32	28	60	85	10 1
1998	415	355	20	25	22	47	67	8 4
1999	380	340	18	23	23	46	64	8 6
2000	370	365	19	23	24	47	66	8 7
2001	360	340	19	24	23	47	66	9 1
2002	335	295	18	25	24	49	67	10 2
2003	310	280	17	21	20	41	58	9 5
2004	300	270	13	17	14	31	44	7 5
2005	305	280	12	19	15	34	46	7 6
2006	295	270	14	20	17	37	51	8 7

1/ Total inventory equals January 1 inventory plus lamb crop plus lambs lost before docking

**Table 2: Sheep & Lambs: Death Losses by Cause and Value of Loss, Montana, 1997-2006.**

Year	Predator Losses		Non-Predator Loss	Unknown Causes	Value of Losses			
	Total	Percent of Total Inventory Lost 1/			Predator	Non Predator	Unknown	Total 2/
	(000) Head	Percent	(000) Head	(000) Dollars				
1997	27 0	3 2	49 1	8 9	1,769 8	3,598 9	627 1	5,995 8
1998	21 8	2 7	38 7	6 5	1,105 5	2,189 8	360 2	3,655 5
1999	20 3	2 7	36 8	6 9	1,094 7	2,198 8	410 2	3,703 7
2000	18 9	2 5	37 3	9 8	1,079 1	2,423 1	609 7	4,111 9
2001	19 9	2 7	38 6	7 5	850 8	1,980 6	375 0	3,206 4
2002	21 4	3 3	39 9	5 7	1,236 0	2,378 2	366 6	3,980 8
2003	17 7	2 9	33 0	7 3	1,309 2	2,608 0	605 7	4,522 9
2004	13 7	2 3	26 0	4 3	1,102 6	2,306 2	364 3	3,773 1
2005	12 4	2 1	28 4	5 2	1,096 4	2,755 6	477 6	4,329 6
2006	14 1	2 4	29 6	7 3	1,044 4	2,453 7	600 3	4,098 4

1/ Total inventory equals Jan 1 inventory, plus lamb crop plus lambs lost before docking

2/ Totals may not add because of rounding.

**Table 3: Sheep & Lambs: Death Losses by Cause, Montana 2005-2006.**

Cause of Loss	SHEEP LOSS				LAMB LOSS				TOTAL LOSS			
	Number of Head		Value in Dollars (000) 1/, 3/		Number of Head		Value in Dollars (000) 2/, 3/		Number of Head		Value in Dollars (000) 3/	
	2005	2006	2005	2006	2005	2006	2005	2006	2005	2006	2005	2006
<b>Predators</b>												
Bear	200	300	30.0	39.3	200	200	14.9	12.2	400	500	44.9	51.5
Bobcat	--	--	--	--	--	--	--	--	--	--	--	--
Coyote	1,500	1,800	225.0	235.8	7,000	8,300	520.8	508.0	8,500	10,100	745.8	743.8
Dog	200	100	30.0	13.1	300	500	22.3	30.6	500	600	52.3	43.7
Eagle	--	--	--	--	900	1,100	67.0	67.3	900	1,100	67.0	67.3
Fox	100	--	15.0	--	1,000	700	74.4	42.8	1,100	700	89.4	42.8
Mountain Lion	--	200	--	26.2	200	300	14.9	18.4	200	500	14.9	44.6
Wolf	200	100	30.0	13.1	100	100	7.4	6.1	300	200	37.4	19.2
Other Animals	--	--	--	--	100	--	7.4	--	100	--	7.4	--
Unknown Predators	100	100	15.0	13.1	300	300	22.3	18.4	400	400	37.3	31.5
<b>Total Predators</b>	<b>2,300</b>	<b>2,600</b>	<b>345.0</b>	<b>340.6</b>	<b>10,100</b>	<b>11,500</b>	<b>751.4</b>	<b>703.8</b>	<b>12,400</b>	<b>14,100</b>	<b>1,096.4</b>	<b>1,044.4</b>
<b>Non-Predators</b>												
Digestive	4/	4/	4/	4/	4/	4/	4/	4/	4/	4/	4/	4/
Respiratory	4/	4/	4/	4/	4/	4/	4/	4/	4/	4/	4/	4/
Metabolic	4/	4/	4/	4/	4/	4/	4/	4/	4/	4/	4/	4/
Other Diseases	4/	4/	4/	4/	4/	4/	4/	4/	4/	4/	4/	4/
<b>Total Diseases</b>	<b>1,800</b>	<b>1,600</b>	<b>270.0</b>	<b>209.6</b>	<b>5,600</b>	<b>5,000</b>	<b>416.6</b>	<b>306.0</b>	<b>7,400</b>	<b>6,600</b>	<b>686.6</b>	<b>515.6</b>
Lambing Complications	1,200	800	180.0	104.8	4,600	5,600	342.2	342.7	5,800	6,400	522.2	447.5
Old Age	3,300	3,000	495.0	393.0	--	--	--	--	3,300	3,000	495.0	393.0
On Back	600	500	90.0	65.5	100	100	7.4	6.1	700	600	97.4	71.6
Poison	700	700	105.0	91.7	800	900	59.5	55.1	1,500	1,600	164.5	146.8
Theft	200	100	30.0	13.1	200	400	14.9	24.5	400	500	44.9	37.6
Weather Conditions	300	2,300	45.0	301.3	6,800	6,900	505.9	422.3	7,100	9,200	550.9	723.6
Other	400	200	60.0	26.2	1,800	1,500	133.9	91.8	2,200	1,700	193.9	118.0
<b>Total Non-Predators</b>	<b>8,500</b>	<b>9,200</b>	<b>1,275.0</b>	<b>1,205.2</b>	<b>19,900</b>	<b>20,400</b>	<b>1,480.6</b>	<b>1,248.5</b>	<b>28,400</b>	<b>29,600</b>	<b>2,755.6</b>	<b>2,453.7</b>
<b>Unknown Causes</b>	<b>1,200</b>	<b>2,200</b>	<b>180.0</b>	<b>288.2</b>	<b>4,000</b>	<b>5,100</b>	<b>297.6</b>	<b>312.1</b>	<b>5,200</b>	<b>7,300</b>	<b>477.6</b>	<b>600.3</b>
<b>Total Loss</b>	<b>12,000</b>	<b>14,000</b>	<b>1,800.0</b>	<b>1,834.0</b>	<b>34,000</b>	<b>37,000</b>	<b>2,529.6</b>	<b>2,264.4</b>	<b>46,000</b>	<b>51,000</b>	<b>4,329.6</b>	<b>4,098.4</b>

1/ Using average reported value for Ewes 1+.

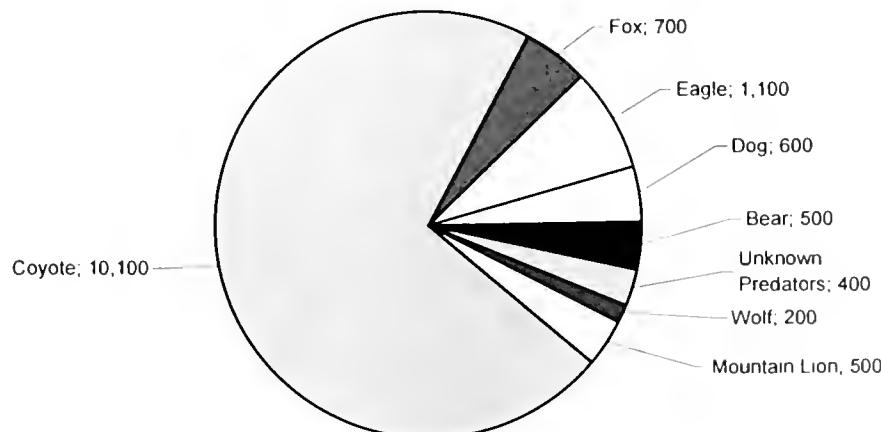
2/ Lamb values equal to market year average price received for lambs multiplied by an average weight of 60 pounds per lamb.

3/ Totals may not add due to rounding

4/ Not available.

-- Denotes less than 100 head.

### Sheep and Lamb Loss by Predator 2006



**Table 4: Sheep & Lambs: Percent of Death Losses by Cause, Montana, 1997-2006.**

Cause of Loss	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Predators</b>	--	--	--	--	--	--	--	--	--	--
Bear	--	--	--	1	1	1	1	2	1	1
Bobcat	--	--	--	--	--	--	--	--	--	--
Coyote	23	22	24	20	22	21	20	21	19	20
Dog	1	2	1	2	2	1	2	2	1	1
Eagle	3	3	3	2	2	2	2	2	2	2
Fox	3	3	2	2	1	2	2	2	2	1
Mountain Lion	1	1	1	1	1	1	1	1	--	1
Wolf	--	--	--	--	--	1	1	1	1	1
Other Animals	--	--	--	--	--	--	--	--	--	--
Unknown Predators	1	1	1	1	2	2	2	1	1	1
<b>Total Predators</b>	<b>32</b>	<b>32</b>	<b>33</b>	<b>28</b>	<b>30</b>	<b>31</b>	<b>30</b>	<b>31</b>	<b>27</b>	<b>28</b>
<b>Non-Predators</b>										
Digestive	2/	2/	5	2/	2/	2/	2/	7	2/	2/
Respiratory	2/	2/	8	2/	2/	2/	2/	10	2/	2/
Metabolic	2/	2/	2	2/	2/	2/	2/	2	2/	2/
Other Diseases	2/	2/	4	2/	2/	2/	2/	3	2/	2/
<b>Total Diseases</b>	<b>9</b>	<b>14</b>	<b>19</b>	<b>15</b>	<b>16</b>	<b>12</b>	<b>14</b>	<b>22</b>	<b>17</b>	<b>13</b>
Lambing Complications	8	14	11	12	11	12	15	11	13	13
Old Age	5	7	6	9	8	4	6	8	7	6
On Back	1	1	2	2	1	1	2	1	2	1
Poison	2	3	2	3	2	2	2	2	3	3
Theft	2	1	2	1	1	1	3	--	1	1
Weather Conditions	31	15	13	11	13	20	11	12	15	18
Other	1	2	2	5	7	7	5	3	5	3
<b>Total Non-Predators</b>	<b>58</b>	<b>57</b>	<b>57</b>	<b>57</b>	<b>58</b>	<b>60</b>	<b>57</b>	<b>59</b>	<b>62</b>	<b>58</b>
<b>Unknown Causes</b>	<b>10</b>	<b>10</b>	<b>11</b>	<b>15</b>	<b>12</b>	<b>9</b>	<b>13</b>	<b>10</b>	<b>11</b>	<b>14</b>
<b>Total Loss 1/</b>	<b>100</b>									

1/ Totals may not add due to rounding

2/ Not available

-- Denotes less than 1 percent

Peggy Stringer  
Director

Christel Pachl  
Agricultural Statistician